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Worldwide Report

EPIDEMIOLOGY

No. 311

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OCCUPATIONAL HEALTH STUDY IN PETROLEUM INDUSTRY PLANNED

Canberra THE AUSTRALIAN in English 26 Nov 82 p 3

[Article by Sue Cook]

[Text]

A NATIONAL occupational health surveillance system is being set up, for the first time, within the petroleum workforce of all companies.

Dr David Christie, reader in epidemiology at the University of Melbourne's department of community medicine, said yesterday that detailed records would be kept of the workforce which could be linked to sickness and deaths in later years.

Dr Christie, in Sydney to address the ninth annual scientific meeting of the Clinical Oncological Society of Australia, said one of the next developments in occupational health would be the establishment of surveillance systems of people in "at risk" industries.

Every one of the petroleum industry's 12,000 members, apart from office workers, was being interviewed and an exact job description was being obtained.

Already 7000 have been interviewed in Victoria, South Australia and Tasmania.

"We will be able to look back for clustering of deaths such as heart attacks, strokes and cancer around some particular job experience," Dr Christie said.

This sort of surveillance program had been talked about by the Federal Government for the uranium industry and there had been specific asbestos surveys.

But this present study was believed to be the first in Australia of an entire industry before trouble was identified.

"The petroleum industry as far as we know is quite safe, but in the United States last year there have been the odd reports of brain tumors," he said.

"It is absolutely essential for the well-being and comfort of the worker to be able to see in Australia whether there is a problem or not, instead of just guessing."

It was imperative that every new industry "right from the word go" established a similar surveillance scheme.

CSO: 5400/7531

DETAILS OF MOSQUITO CONTROL PROGRAM IN WEST REPORTED

Perth THE WEST AUSTRALIAN in English 25 Nov 82 News of the North p 13

[Text]

THE State Government will give the Shire of Roebourne a subsidy of \$3000 towards the cost of buying a Leco ultra low volume cold fogging machine for use in controlling mosquitoes.

The MLA for Pilbara, Mr Brian Sodeman, said the decision by the Minister for Health, Mr Young, would be welcomed by the council.

Mr Sodeman said the machines were necessary as part of the Australian encephalitis control programme.

The shire had indicated it was prepared to buy one of the machines, provided a subsidy of 50 per cent (up to a maximum of \$3600) was offered towards the purchase cost.

Last year \$3000 was given to the Wyndham-East Kimberley, West Kimberley and Port Hedland shires for similar equipment.

Mr Sodeman said the Shire of Roebourne had requested the subsidy, pointing out that as the fogger would have an application in other areas than mosquito control, it would be a valuable addition

to its pest control unit.

Studies over recent years had demonstrated seasonal activity of both Australian encephalitis and Ross River virus in the Kimberley and Pilbara regions.

The Public Health Department was closely involved in these studies, and was concerned that communities in the North should be protected from vector mosquitoes which transmitted the viruses.

Mr Sodeman said the cold fogging machine was used for adult mosquito control by dispensing very fine droplets of pesticide which remained airborne for relatively long periods.

It was commonly used throughout Australia for mosquito control, and could also be used for fly, sandfly and midge control. The price of the unit included skid mounting, so it could be lifted on and off a utility.

Mr Sodeman said the Commonwealth Government had made a grant of \$23,424—on a dollar for dollar basis—for measures to control mosquito borne diseases in this State. The University of WA would receive \$35,000 to continue its research into encephalitis.

GREATER USE OF RECYCLED SEWAGE WATER PROPOSED

Melbourne THE AGE in English 27 Nov 82 p 3

[Article by Paul Robinson]

[Excerpts] The Victorian Government is reviewing its charges for water recycled from sewage, in order to conserve pure water for human consumption during drought.

Health and water quality experts say thousands of litres of treated water are being poured into Bass Strait from the Board of Works purification plant at Carrum.

They say the resource is being wasted in time of water shortage and could be used, without fear of transmitting disease, by municipalities for watering parks and gardens, and by market gardeners and farmers for processed vegetables and pasture.

At present only four golf clubs on the Mornington Peninsula have been given a permit by the Health Department and are using recycled water. This is because of the cost, and the lack of information about the availability of the water.

The technical secretary of the Reclaimed Water Committee, Mr Graham Brent, who works for the Ministry of Water Resources, said yesterday that two permits had been issued to market gardeners on the Mornington Peninsula. They had not begun irrigation.

Mr Brent said under Health Department regulations growers could not spray irrigate for fear that bacteria would form on the leaves of vegetables. He said growers had to furrow or drip irrigate, which provided no danger to health because harmful bacteria could not be absorbed by the plant and later eaten.

Mr Brent said the regulations also stipulated that vegetables irrigated with recycled water had to be peeled or processed.

He said spray irrigation conducted by the Department of Agriculture's vegetable research station at Frankston, using recycled water for the past four years, produced higher yields and required 35 per cent less fertiliser.

Mr Brent said the researchers found fewer bacteria on the vegetables "than ones found in some supermarkets".

"We were rather surprised when one of the team dug up some carrots in his back yard and found more bacteria on them than in the test lot," he said.

The chairman of the committee, Dr. Nick Sloan, who works for the Health Department said yesterday he favored using recycled water for vegetable growing and on pasture for livestock.

Dr Sloan said there was a possibility of beef measles being transmitted if cattle pasture was irrigated with recycled water but following a survey of more than 5000 people "I don't see too many problems".

CSO: 5400/7531

IMMUNIZATION ENCOUNTERS PROBLEMS; LEGISLATION PROPOSED

Sydney THE SYDNEY MORNING HERALD in English 6 Dec 82 p 6

[Article by Phillip McIntosh]

[Text] A professor of medicine has suggested "no vaccine, no school" legislation to raise the level of immunisation in Australia.

Under the legislation, immunisation against certain diseases would be a prerequisite for entry to school and to subsidised pre-schools.

Professor Anthony Radford also recommended that Government family allowances for children over a certain age, such as two years, should be tied to complete immunisation.

He said too many people were unprotected against common infectious diseases such as diphtheria, tetanus, measles and polio.

Because of a lack of records it was impossible to describe the true state of immunisation protection in Australia. "While the overall coverage with triple antigen (whooping cough, tetanus, diphtheria) and poliomyelitis vaccine is moderately good, there are groups and individuals with inadequate protection," Professor Radford said.

"Levels of immunity to rubella, measles and tetanus remain consistently deficient."

Professor Radford, of the unit of primary care and community medicine at Flinders University in South Australia, wrote about immunisation in the journal 'Community Health Studies'.

Several surveys suggested that only 83.5 per cent of Australian parents of children aged two to five were sure their children had been immunised with triple antigen. The level may be higher, as an average of 11.5 per cent of parents did not know their children's immunisation status. In Victoria, 17 per cent of parents did not know.

Less than three-quarters of children had completed oral polio vaccination, and even more parents were unsure of their children's status with this immunisation.

Professor Radford said less was known about the level of immunisation in adults. "While the almost complete protection of Victorian school children with tetanus immunisation in recent years has been claimed to have "eradicated" this disease in children in that State, adult coverage is still inadequate."

The picture for measles was unsatisfactory but improving, he said. An urban study in New South Wales in 1976 found that only a third of mothers with children aged less than six years had ever been immunised.

Looking at possible explanations for the immunisation rates, Professor Radford said there was little evidence to support claims of apathy by parents.

However, many parents were ignorant about the significance of the diseases. About 30 per cent of mothers surveyed in Sydney thought that polio "was mainly a disease of children". Twenty per cent of them thought whooping cough a disease of babies and half thought it a disease of children.

He said Australia should work towards a measles, mumps and rubella vaccination programme after the age of 15 months and this should become part of "no-vaccine no school" legislation.

CSO: 5400/7531

BRIEFS

TESTING OF IMPORTED FOOD--Federal Government scientists have begun a pilot program for a national surveillance scheme to examine imported food and other material that could endanger health. Most of the testing is being done at the new Australian Government Analytical Laboratory at Pymble. The \$8.6 million laboratory, which played a key role in uncovering the meat and barramundi substitution rackets, was officially opened last Friday by the Minister for Science and Technology, Mr Thomson. According to a senior scientist, the six-month program will determine what resources would be needed for a national surveillance scheme to examine any imported material, especially food, likely to be a health hazard. The scheme would be much more uniform and thorough than the testing done to date, he said. The tests are being done for the Federal Department of Health under revisions made last year to the Quarantine Act. Another scientist said the pilot program was concentrating on imported foods such as peanuts, powdered milk, spices, coconut and dates. These foods had been responsible for outbreaks of food poisoning overseas because of contamination. [Richard Eckersley] [Text] [Sydney THE SYDNEY MORNING HERALD in English 23 Nov 82 p 11]

RUBELLA IN SYDNEY--SYDNEY--An epidemic of German measles in Sydney could result in serious defects in new-born babies, a paediatrician warned yesterday. Issuing the warning through the University of Sydney paediatric health-education unit, he said that doctors had been first alerted to the possibility of an outbreak in the disease by community health workers. "We checked with the Institute of Clinical Pathology and Medical Research and we found that last month they had 12 positive tests for rubella, as the disease is medically known," he said. "This compared with no positive tests in the same month a year ago." He said that the baby of a woman who had the disease during pregnancy, especially in the first three to four months after conception, could be born with major defects in eyesight, hearing and heart condition. There had been reports of German-measles outbreaks in schools on the North Shore and in the western suburbs. [Excerpt] [Perth THE WEST AUSTRALIAN in English 1 Dec 82 p 10]

CSO: 5400/7531

PAPERS REPORT, COMMENT ON SPREAD OF CHOLERA

Statistics Through November

Dhaka HOLIDAY in English 11 Dec 82 pp 3, 11

[Article by Jaglul Alam]

[Text]

The reappearance of a "classical type" of cholera in an epidemic form in eight districts of the country has so far claimed 1200 lives officially while the unofficial death figure has already reached 2800 and has affected another 28000 people.

The situation deteriorated because some relevant government authorities could not take proper remedial initiatives in time.

Up to October 15, about 144 persons in Rangpur, 246 in Mymensingh, 300 in Barisal, 170 in Dhaka, 90 in Pabna, 120 in Comilla, 125 in Jessore, 80 in Sylhet died of cholera while during the subsequent 15 days another about 1100 died of this disease.

The government statistics show that during the last two months more than 1200 people died in six districts while about 11000 people were affected by cholera and diarrhoeal diseases.

According to these figures up to November 28, 242 people in Comilla, 195 in Mymensingh, 202 in Dhaka, 118 in Sylhet

and 152 persons in Barisal died and 4000 people in Dhaka and 2100 in Comilla were attacked by the disease.

It may be recalled that last year 450 persons died of cholera throughout the country and the disease did not break out in an epidemic form at that time.

Soon after the disease broke out in Dhaka and Narayanganj during the first part of September, it spread all over the country very quickly helped by the lack of an adequate number of working tubewells in the country.

According to reports, about 2600 tubewells in the rural areas of Dinajpur alone, have so far gone out of order and 53 of the remainder have gone out of order partially.

The Public Health Engineering Department under the Ministry of Local Government and Rural Development sank 19,480 tubewells in the rural areas of the district. A large number of these tubewells became inoperable some three years back but no effective measures were

taken in time to repair them.

Recently the Minister for IGRD maintained that at present there are about five lakh tubewells in the country and these are able to provide pure water for only 35 percent of the rural people.

He also said only 26 percent of the urban population are now being assured of pure drinking water.

According to reports 40 percent of the tubewells in Mymensingh, 25 percent in Chittagong, 50 percent in Chittagong Hill Tracts, 34 percent in Comilla and 60 percent in Barisal are not being properly maintained.

CURATIVE MEASURES

Meanwhile, the government has taken some preventive and curative measures in the affected areas of the country. So far the Directorate of health has organized 601 medical teams for the six major cholera affected districts each comprising six to seven persons including health officers, field workers and family planning

workers together with local influential persons of the affected areas.

At the same time the government has distributed some 24.25 lakh inoculations, 1.30 lakh oral rehydration salt packets and about 9.54 lakh water purifying tablets. Eight army medical teams have been sent to different areas affected by the disease.

According to the latest news received by the central

control room for cholera at Dhaka the situation registered some improvement last week. On November 30, report of six death cases from Dhaka, two from Khulna, four from Pabna and three each from Comilla and Faridpur were available while only 360 persons were affected on the day throughout the country.

There was no casualty in Mymensingh and Kush-

tia, the two major cholera affected districts on that day, it is gathered.

According to experts this particular type of cholera was first detected in Chittagong in 1963 and in Dhaka the following year. Since then a few cases occurred every year in Dhaka and in 1973 it caused an epidemic for the first time.

In 1960-81 only nine cases of this type of cholera

were seen in the Institute of Cholera and Diarrhoeal Diseases in Dhaka.

This center, which is engaged in research leading to better and inexpensive treatment of cholera and other forms of diarrhoeal diseases, viewed the current year's outbreak as a wave repeating after a few years.

Deaths on Pirojpur

Dhaka THE NEW NATION in English 11 Dec 82 pp 1, 8

[Text] Pirojpur district is in the grip of cholera and over 300 people have died in the Sadar subdivision alone during the last fortnight.

The disease is fast spreading south taking a toll of another 60 already in the last two days from Kathalia in Jhalakati subdivision.

District health office, however, confirmed 343 deaths out of about 2500 attacked by the deadly disease in the two subdivisions.

Army medical teams from Jessore cantonment moved to the affected areas to reinforce the health officials. The divisional deputy director of health moved his headquarters to combat the disease when it started in an epidemic form on November 24.

Acute crisis of medicine is aggravating the situation. A bottle of saline was selling as high as at Tk 110 as against its normal price of Tk. 30.

Local administration has sent S.O.s. to Dhaka to rush me-

dicines and anti-cholera vaccines.

The district administration listed the reasons for the epidemic as: 1) impure drinking water, 2) rotten sea fish and 3) unwholesome food.

The district public health department admitted that more than one third tubewells in the area were lying out of order for a long time. People have been taking water from canals and ponds.

Rotten sea fish which have been available cheap in the local market also helped spread the disease. Poorer section of people have been taking unwholesome food including those in open places.

Fifteen medical army teams arrived from Khulna and Jessore sent to the interior to combat the disease. Officials said at least two medical teams were now engaged in each of the affected thanas.

Thanawise breakdown of official death toll is: Pirojpur 207, Nazirpur 4, Banaripara 2, Sawrupkati 31, Kaokhali 13, Bhandaria 29, Mathbaria 8 and Kathalia 49. Exact death figures of other thanas were not immediately available.

Officials said the victims were mostly from impoverished families who had been taking unwholesome food including rotten fish.

They, however, said strong administrative measures were taken against the sale of rotten fish and foodstuff exposed to contamination.

Officials further said the situation in Pirojpur subdivision has been brought under control. About 80 percent people of the subdivision were given inoculation and vaccines to combat the disease. But this has not effectively stopped its spread southwards to Jhalakati.

Deaths in Jhalakati

Dhaka THE NEW NATION in English 12 Dec 82 p 1

Text: JHALAKATI, Dec 11: Cholera has claimed at least 390 lives in Mohiskandi Rampura, under Kathal PS in a fortnight. And the overall situation still remains unabated.

Government sources peg the death toll at 300, much lower than the unofficial count.

According to their estimate 200 more people are still suffering from this disease.

A government source disclosed to this correspondent, regretting, that, essential medicines for this deadly disease could not be procured.

Non availability of fresh drinking water is said to be the main reason for spread of disease.

No tubewell has been allotted for the thana since 1975. And of 268 shallow tubewells, 195 have now gone out of order.

More Deaths in Pirojpur

Dhaka THE NEW NATION in English 20 Dec 82 p 1

Text: The cholera death toll in Pirojpur subdivision rose to 373 with the death of 30 more people till Friday, according to the official source.

The unofficial death toll was, however, put at around 550 since third week of November. Cholera broke out in the subdivision in an epidemic form.

A senior district health official told The New Nation over

telephone yesterday that about 3,300 people were attacked by the disease. He claimed that they have been able to combat the disease with the help of Army medical teams.

He said the disease spread mainly due to drinking polluted water. In the absence of tubewell most people of the villages were taking contaminated water from ponds and canals.

The official said the worst affected areas are Mathbari, Gazirapara, Indrakani and Pirojpur thanas. Seventeen people died in Indrakani and Pirojpur during the last two weeks.

Local health officials and Army medical teams were continuing preventive measures.

Pirojpur Kalyan Samity based in Dhaka sent three medical teams were also working in the affected areas.

Deaths in Barisal, Patuakhali

Dhaka THE NEW NATION in English 23 Dec 82 pp 1, 8

Text: At least 897 people died of cholera in the districts of Barisal and Patuakhali during the last one month. The death toll may even exceed one thousand according to unofficial reports.

Talking to the New Nation the deputy director of health in charge of Khulna Division, who has temporarily shifted his headquarters to Barisal to supervise the anti-cholera drive, claimed that the situation is now under control. He, however, said there are reports of sporadic attacks in Bagerhat sub-division under Khulna district.

According to him, since November 20 a total of 6424 people were attacked by cholera and 897 deaths were recorded.

The worst affected areas are Pirojpur and Jhalakati subdivision having 382 and 306 deaths respectively.

Explaining the situation the health official said, there are now sufficient medicines to meet the situation. Sufficient number of medical personnel and paramedics are engaged in fighting the disease. Besides sending one medicine graduate and one paramedic with each team to each union, mobile teams and Army personnel are working in some of the worst affected areas.

Measures have been taken to check the sale of rotten fish and exposed foodstuffs. Mobile courts have been set up in market-places, the biggest problem of

supplying pure drinking water to the people of the affected areas could not be solved yet. Sources of drinking water have also decreased due to the Farakka effect and people of these areas are drinking water of rivers, which is the main source of cholera infection.

Many of the tubewells of the area are lying out of order. Proofs were also available of contaminated waters in ponds and tubewells.

Knowledgeable sources, suggested, immediate measures should be taken by the Public Health Engineering to provide pure drinking water to the rural people by sinking more tubewells and repairing the existing ones.

Dhaka THE NEW NATION in English 6 Dec 82 p 5

[Text]

There is bad news from Brahmanbaria. Over a hundred and fifty people have died of cholera and related gastro-intestinal diseases. Even those pastmasters in understatement, the officials, have conceded 560 cases and 74 deaths there.

Of the six thanas affected Sarail is one of the worst hit, according to a New Nation news report. Sarail, just come to think of it—Sarail coming to such state. We don't say this because of the Dewans or their supreme creation the Sarail dog kennel? But for sheer culture—education and refinement that is—Sarail could have been the last place to be associated with cholera—the disease of the backward, of those that do not know a thing of either public or personal hygiene. In the colonial British or even Pakistan times cholera hardly had visited pockets of social progress. That even Sarails are falling to the onset of this patently poor man's disease can have one clear meaning—a sure fall in the cultural level of the place.

But the latest and widespread outbreaks point towards a new factor. Not so much bad hygiene as sheer impoverishment is possibly at the root of the current sweep. Cholera, at present euphemistically termed in most cases as diarrhoea, God knows why—has traditionally been linked with a shortage of portable water. But now this seems to have taken on an odd connection—food. Or want of food, to be precise.

There is no food problem in the country at the moment—that is accepted on all hands. But some people feel that there recently has been a serious deterioration in the buying capacity of those in the lowest and the broadest social stratum. And some of them are dying because they are taking, let us resort to the standard official understatement, 'unwholesome' food.

The New Nation had commented even last week on the urgency of the cholera problem. But that was all from an epidemiological viewpoint, emphasising the preventive and hygienic aspects of the problem. But if the current toll

in human life and suffering has anything to do with our people's socio-economic situation, it would become a case of long treatment and late healing. And it would warrant a truly all-in endeavour by the leaders of society and government.

Consumption, as also indeed smallpox, was associated with poverty. Those two are said to have been largely eliminated even before the society had been lifted clear of the poverty line. Unless the cholera thing is handled in time, and effectively, there is no reason why the other two would not stage a terrible come-back.

We all have a share in our own undoing. These deaths are medical matter only partially and these are more symptoms of an unhappy situation and forebodings of an uncertain future. Shall we not all take the hints all around—so liberally given by nature and society?

Unflattering to Government

Dhaka THE NEW NATION in English 13 Dec 82 p 5

[Editorial]

[Text]

One does not know how far efforts to contain the cholera death sweep in Pirojpur, has met with success. But, as was feared, the epidemic has spread all right northwards to balakati with unmitigated fury. Indeed the spread has been in all directions. The dead are still being counted in hundreds and if things do not start looking up soon, any day they will hit thousands.

But it is man and not figures that is dying. And one man's death is as good a tragedy or as bad a loss as thousands' in concrete terms of personal trauma. It is the sign only of the backwardness of the society or the heartlessness of its advanced classes that gravity of unnecessary deaths is weighed more in terms of number than in terms of humanity and society, culture and medicine.

Nevertheless, number swelling inexorably to thousands of death has a numbing effect on our faculties and soon enough fails to

register its time import on minds not only surviving but perhaps prospering in far-off cities. As long as pestilence is raging in remote char lands, the city mind thinks it can wallow gleefully in its self-grown complacency. But hasn't the poet counselled us "Oadho holey ki proloy bandho thahey" (You don't shut your eyes to avert a holocaust, do you?)? If the rest of the society cannot rush to the succour of the dying multitude down there, it can allow itself at least to be shocked. If there's no sense of identity with whoever is in trouble wherever, there is nothing in this nation that can save and sustain it.

But even best of sentiments alone would not stop the dirty dehydrating affliction even for a while. If it could, New Nation which has already written twice covering many aspects of the epidemic, would have continued writing till the damned thing was swamped dead. But that is not to be. So we repeat our appeal to government and society to hark to the rather conventional strategy of supplying potable water, saturating the area with vaccines and inoculations and sending in doles of foodstuff. We would also like to draw the attention of the government to the need for re-examining and reassessing the food situation in the affected areas, for people fall prey to diseases more easily when they do not have enough to eat.

Unless the toll curve starts taking a dip, this cholera thing will become regular scandal in no way flattering to the administration.

Reports Termed 'Exaggerated'

[Text]

The attention of the Government has been drawn to a news item originated in Tokyo by a section of foreign media and press quoting one Professor Yushifumi Takeda as saying that a heavy death toll due to Asiatic cholera occurred in Bangladesh during the period from September to December 1963. This report is highly exaggerated and not based on actual fact save a PID hand out.

In fact, it is a common knowledge that the outbreak

of Diarrhoea is a health problem in Bangladesh as is the case in all the developing countries. In Bangladesh prevalence of Diarrhoea is particularly observed during the monsoon and post monsoon months. During the period from September this year there were outbreak of Diarrhoea in various areas. According to the reports monitored by the Government from all the parts of the country and also the report received from the ICDDR (International

Centre for Diarrhoeal Disease Research Bangladesh) hospital and treatment centres there were a total of 67,863 cases of Diarrhoea during the period from September till date. The total number of death out of this is 1,874 which comes to about 2.75 per cent of the total number of attacks.

On the basis of Bacteriological culture by the ICDDR about 20% of the cases reported to the hospital were found to be cholera cases but death due to cholera was very few.

and out of a total of 7275 cholera cases there were only 31 deaths which amounts to 0.42 per cent. On the other hand out of 18,475 non-cholera diarrhoeal cases reporting to the ICDDRB hospital there were 98 deaths which amounts to 0.53 per cent.

Although generally ELTOR type of cholera is observed in Bangladesh this year some new strain of cholera have been found and are being studied.

A large number of teams of the Government Health Services is effectively working in all the affected areas in order

explained to them the government's administrative reorganization programme and also other measures.

He was also apprised of the problems being faced by the Bangladeshi expatriates.

The Foreign Minister due to return home tomorrow (Tuesday).

CS: 5400/7075

SMALLPOX OUTBREAK REPORTED ; CLARIFICATION ISSUED

Report on Outbreak

Dhaka THE BANGLADESH TIMES in English 4 Jan 83 pp 1, 8

[Text]

Pox has broken out in a number of villages under three thanas of Narayanganj. The disease is now spreading with the potentials of an epidemic. The thanas are—Bandar, Fatulla and Siddhirganj.

The outbreak of the disease has made the inhabitants of these areas panicky, and most of them are now refraining from normal house-to-house visits, except in cases of urgency.

A total of 70 persons have been attacked by the disease in ten houses of Aliganj village alone. According to some patients, before blisters were visible each patient suffered from fever for one day each. The next day blisters were spread all over their bodies.

Haji Afzal of Aliganj under Fatulla thana who is also a patient, told The Times that his daughter Ayesha Afzal who used to reside in a school hostel in Dhaka city was the first to contract with the disease. After she came to her parents house the disease spread to all the five members of the family. Ayesha Afzal is now cured. Other members of the family are now undergoing treatment.

In Bandar thana, the affected villages are — Nabiganj, Katrakhal and Sonakanda. Three other villages affected by the disease are — Jalirui, Bhul-

ghar, and Mijbiji under Siddhirganj thana.

Official sources, told The Times that small pox was eradicated from the country three years ago, and suggested that the reported cases might be incidences of chicken pox.

The District Civil Surgeon of Dhaka said vigilance teams of the health department all over the country were very alert about reporting incidence of small pox. He said that no such case was reported since Bangladesh officially declared the complete eradication of small pox from the country.

The Civil Surgeon suggested that the cases in question might be of chicken pox. Common people generally cannot distinguish between chicken pox and small pox, and on many occasions they reported about incidence of small pox whereas the disease was actually chicken pox.

He told The Times that medical teams would be sent to the affected areas by Monday afternoon, and the diagnosis of the diseases could be known today (Tuesday).

Meanwhile, the residents of the affected areas have urged the authorities concerned to take preventive measures to check further spread of the disease.

Government Clarification

Dhaka THE BANGLADESH TIMES in English 7 Jan 83 p 8

Text]

Attention of the Government has been drawn to a recent report in an English daily alleging that pox has broken out in three thanas of Barisal, Patuakhali and Sadirgonj under Narayanganj Sub-division says an official announcement.

The report is misleading and exaggerated and designed to create panic.

To remove any misgivings or fear in public mind the correct position is stated as follows:

After on the spot verification by the Civil Surgeon and the Deputy Civil Surgeon of Dhaka and the Deputy Civil Surgeon of Narayanganj it has been established that the alleged cases are in fact cases of chicken pox. Chicken pox indeed is not an unusual phenomenon during this part of the season. The recent occurrence of chicken pox in the affected areas as reported in the said newspaper is however limited to a few houses only.

Nevertheless, necessary preventive and curative measures have been initiated in the area. There is no cause for panic for the members of public.

CSO: 5400/7077

BRIEFS

BRAHMANBARIA CHOLERA DEATHS--BRAHMANBARIA, Dec 29--Cholera and diarrhoeal diseases have claimed 45 persons and have attacked another 150 persons at Banchharampur thana. Forty five persons died at Kunarampur village alone and the disease was spreading fast to neighbouring villages Kadamtuli and Dularampur. The local people of Banchharampur has appealed to the Sub Divisional Officer for despatching medical teams for combatting the epidemic. [Dhaka THE NEW NATION in English 30 Dec 83 p 1]

CSO: 5400/7076

CLEANUP OF PEMBROKE DUMP CALLED TOP GOVERNMENT PRIORITY

Premier's Pledge

Hamilton THE ROYAL GAZETTE in English 28 Dec 82 p 2

[Text]

Premier the Hon. John W. Swan yesterday pledged to make the cleaning up of the Pembroke dump a top priority for the United Bermuda Party Government.

"I lived in the area as a young boy, and the dump was there at that time," said Mr. Swan, adding that even then residents of Pembroke were faced with "fumes" drifting from the Island's principle garbage dump.

"The problem still exists, and it is my intention during my tenure in the office of Premier to put great priority to cleaning up the situation," said Mr. Swan.

"There is such a shortage of land in Bermuda that a good development plan for the area will obviously be of great benefit to everyone."

Mr. Swan said that cleaning up of the area would mean that refuse would have to be disposed of in a different manner. It has long been suggested that the dump be replaced by an incinerator.

Mr. Swan also said that

Government would be taking a closer look at the abuse of drugs in Bermuda — from the enforcement of existing laws to the programmes that should be initiated for rehabilitation of drug users.

Plans for Incinerator

Hamilton THE ROYAL GAZETTE in English 4 Jan 83 pp 1, 5

[Text] Long-awaited plans for an incinerator plant to replace stench-ridden Pembroke Dump are finally in the pipeline.

Public Works Minister the Hon. John Stubbs revealed yesterday that Government hopes to invite tenders towards the middle of this year for the building of a plant which would release 30 acres or so of Pembroke land while softening fuel bills by creating energy from burning rubbish.

Dr. Stubbs said a report was now being prepared on the most suitable type of incinerator for Bermuda.

"I would say at this stage that an incinerator to replace that eyesore is a probability rather than a possibility and we hope we can invite tenders towards the middle of the year," the Minister said.

Yesterday PLP representative for Pembroke East Central Mr. Stanley Morton said he welcomed positive thinking on the dump issue but was sceptical whether action would actually follow.

"This problem has gone on since I was a little fellow at school," Mr. Morton said.

"I would like to see the report and know what type of contracts might be involved — it's not the first time I have heard grand schemes proposed for that area," he added.

Pembroke Dump has been the crux of a controversy for years with repeated calls for measures to remove what has become a vast eyesore in the heart of Bermuda.

The incinerator idea has been around for some time but no real action had been taken on it.

Apart from removing pungent odours, the project calls for the creation of a large area of parkland in the

three of four years it will take to get the incinerator built and on line.

"We hope that in the not too-distant future we can have a beautiful area of parkland and open space where there has been an eyesore that has long disturbed residents," Dr. Stubbs said.

He said the site was unsuitable for housing but ideal for landscaping.

The incinerator would probably go up next to the Bermuda Electric Company's installation in Pembroke.

Talks between Belco and Government officials would be needed to ensure that the incinerator idea and Belco's planned expansion plans could exist side by side.

Dr. Stubbs admitted that the project would have a "fairly substantial" capital cost but said a lot could be offset by energy regeneration.

"We would go for the best scheme for Bermuda and not necessarily the lowest price," he said.

"It also would mean a softening of the steady escalation of energy bills they probably would not rise as steeply as before," Dr. Stubbs said.

The incinerator report is now being prepared by Mr. Geoffrey Melotti, the senior official at Public Works in charge of refuse disposal.

Dr. Stubbs said the next step would be to invite tenders, probably this summer.

He said the plant need not be cumbersome or an eyesore itself, although he agreed it would have a chimney-type stack.

"But it would not give off noxious smells or be noisy, and obviously, we in Bermuda with our particular awareness of pollution would have to make sure it would be the most suitable," Dr. Stubbs said.

"The process would be so efficient and has so many attractive features that we have to consider it a probability with tenders likely to go out by the middle of the year," Dr. Stubbs added.

The move was welcomed by the two UBP prospective Parliamentary candidates for Pembroke East Central Mr. Lawson Mapp and Mr. Bob Barritt. They have urged a meeting to study alternatives for the site in greater detail.

PLP MP Mr. Stan Morton also welcomed "positive thinking" but said he would like to see whatever report emerged and also scan details of any contracts.

In the meantime he said he remained slightly sceptical.

"I don't mean to be a prophet of doom but I would like to see more details of it," Mr. Morton said.

"At least it demonstrates positive thinking and I am glad of that," Mr. Morton added.

POGOSTAN VIRUS STILL AFFECTING THOUSANDS IN FINLAND

Helsinki UUSI SUOMI in Finnish 11 Jan 83 p 8

[Article: "Nature Is Source of Several Diseases"]

[Text] Many diseases can be acquired from the environment. Thousands of Finns came down with Pogostan disease in epidemic proportions after the rainy summer of 1981.

The plague carried by rabbits, which is contagious for humans, can also be acquired from the environment. There have been cases of wood tick phrenitis (5 cases and all in the Aland Islands), several cases of mosquito virus, and dozens of Finns have been infected with mole fever. It is suspected that two Finns have died of mole fever, but it has not yet been possible to confirm this.

Pogostan disease is caused by an arbo virus. It is spread by bloodsucking insects (mosquitoes in the late summer and early fall). It is not contagious from one person to another.

The disease can be transferred from an infected mosquito to the spine of a bird, for example, and from there to a bloodsucking insect, and so on. The reason for the increase of this disease in rainy summer seasons is that the larva of fall mosquitoes lives in water puddles in the middle of summer. If it is dry, the larva will not survive.

The first symptom of Pogostan disease is a reddish, itchy rash that appears a few days after being bitten by a mosquito. The worst symptoms are those in the joints. Initially, there is swelling and considerable pain in the ankles, knees, and wrists. The swelling will go down in a couple weeks, but the stiffness of the joints and pain can last for months.

"Detection of the disease is difficult if there are no visible symptoms on the skin and the patient goes to see a doctor only because of prolonged discomfort in the joints," states Doctor Pasi Kuusisto of the Ilomantsi Health Center, a researcher and expert in Pogostan disease.

Children and young people have far fewer joint symptoms than adults.

Treatment of the disease depends on the symptoms. Acetosalicylic acid and related medicines are primarily used to reduce inflammation and pain in the joints. Rest is also part of the treatment. The pain in the joints can last for months.

"The virus causing the disease has not yet been isolated, but it is closely related to the African Sindbis virus," states Kuusisto.

The disease is encountered the most in Northern Karelia and Kainuu. No data has been obtained from Lapland so that there is no determination on the incidence of Pogostan there. There have been no incidents in Western Finland, but there have been cases in Sweden and Soviet Karelia.

10576

CSU: 5400/2511

LAW ON CONTAGIOUS DISEASE PREVENTION, CONTROL PUBLISHED

East Berlin GESETZBLATT DER DEUTSCHEN DEMOKRATISCHEN REPUBLIK in German Part I
No 40, 10 Dec 82 pp 631-637

[Official text of "Law on Prevention and Control of Human Contagious Diseases",
dated 3 December 1982, signed by E. Honecker, Chairman, GDR Council of State]

[Text] For the protection against contagious diseases, the People's Chamber
passes the following law:

First Section: Scope and Principles

Article 1: Scope

(1) This law specifies the tasks, rights and duties for preventing and controlling human contagious diseases.

(2) The law is valid for
state organs,
combines, commercial organs, industries, associations, establishments, social
organizations (referred to as industries in the following) and,
citizens.

Principles

Article 2

Protection from contagious diseases must be provided above all through effective preventive measures. Among these are the continued provision of work and living conditions beneficial to health, the avoidance and elimination of sources of infection danger, the carrying out of protective measures and the promotion of a health conscious behavior by every citizen. In the establishments for citizen education and professional education, the definitions and basic principles of prevention and control of contagious diseases are an important part of health education.

Article 3

Contagious diseases must be controlled forthwith by introducing the required medical and organizational measures including measures to prevent their spreading.

Article 4

(1) The minister and chief officials of the other central state organs, the chairmen of local councils and also the heads of industries (in the following, referred to as chiefs of state organs and of industries) are responsible for the effective prevention and control of contagious diseases in their area of authority. Thereby they insure cooperation with the medical establishments especially with the State Health Inspection and they work in cooperation with the citizens and their social organizations.

(2) The German Red Cross of the GDR supports the measures to prevent and control contagious diseases. Its members cooperate especially with the local and industrial health activities.

Article 5

(1) The measures to prevent and control contagious diseases must be carried out employing the newest scientific knowledge.

(2) Physicians and other workers of the health care system cooperate significantly with the purposeful information and health education of the citizens to reinforce healthy modes of behavior, and to prevent and control contagious diseases.

(3) The medical and social care must be directed toward reestablishing the health and productivity of the afflicted and enabling them to participate actively in the life of society.

Second Section: Concept Definitions

Article 6: Contagious Diseases

(1) In the sense of this law, contagious diseases are diseases produced by pathogens which can be directly or indirectly transmitted to humans.

(2) In the sense of this law, a person is ill when the presence of a contagious disease is confirmed or has to be assumed with great probability.

(3) Suspected of disease is a person who has symptoms which make likely the presence of a contagious disease.

(4) Infectious is a person who excretes the pathogen or carries it within or on himself in a manner which can make him a source of infection irrespective of the presence or absence of symptoms. Chronic carrier is one who, without being ill, has excreted the pathogen over a certain period of time.

(5) Suspected of having been infected is a person, although free of symptoms, where it has to be assumed that he had contracted the pathogen.

(6) Death from a contagious disease is present when it is confirmed, or it has to be assumed because of the circumstances, that a contagious disease was the direct cause of death or was a contributing illness without direct connection with the cause of death.

Article 7: Sources of Infection Danger and Danger of General Infection

(1) Sources of infection danger are:

- a) persons, infected or can be feared to spread a contagious disease or those who have already been the cause of spread,
- b) animals, infected and which can be feared to spread the infection to man, or which have already been the cause of spread to man,
- c) objects and conditions by which contagious diseases can be spread or have already been spread.

(2) Danger of general infection is present when

- a) through determining or suspecting sources of infection danger, the direct or indirect infection of many persons has to be expected,
- b) the outbreak of a highly infectious contagious disease threatens, or
- c) a contagious or presumably contagious disease spreads further whereby the health, and the working and living conditions of many people can be considerable influenced.

(3) Epidemic is the massive presence of a contagious disease or presumably contagious disease within a limited time period and locality.

Article 8: Protective Measures and Protective Vaccinations

(1) Protective measures are all preventive and control measures which, in a single case, should stem the spread of a communicable disease or, in case of an epidemic, should effect the decline and obliteration of the contagious disease. Protective vaccinations and other protective practices are the preventive administration of vaccines and other medications which may inhibit or control a possible effect of pathogens.

Third Section: Responsibility of the State for Protecting From and Controlling Contagious Diseases

Article 9

(1) The Minister of Health takes measures mandated by this law to prevent and control contagious diseases. He determines:

- a) the undertaking of protective vaccinations or other protective practices,
- b) the duty to report certain contagious and other equivalent diseases,
- c) the contagious diseases in the presence of which the patient, those suspected of having it or infectious persons are hospitalized and the conditions for releasing them from there,

d) the measures to disinfect within the area of human medicine, to sterilize medical objects, materials and preparations, and to control those which endanger health as well as the procedures, means, equipment and safety precautions used,

e) the conditions for working with pathogens and experimental animals,

f) the industries in which special conditions and principles are in effect to protect from contagious diseases.

(2) The Minister of Health

a) coordinates the measures required for protection from epidemic diseases in international contacts taking into consideration the obligations toward international laws signed by the German Democratic Republic and enforces them,

b) can issue special protective conditions for those entering, leaving or traveling through the country, and can demand the presentation of health and vaccination certificates,

c) organizes the international cooperation by the German Democratic Republic for the prevention and control of contagious diseases.

Article 10

(1) The Minister of Health is the chairman of the Central Commission of the Ministerial Council for protection from and control of epidemics. He leads the measures to protect from and control epidemics, to ward off the danger of general infections and to eliminate attendant phenomena in all regions of society. The members of this commission are appointed by the chairman of the Ministerial Council on the advice of the Minister of Health.

(2) The Minister of Health defines the basic principles for the activity and composition of the commissions, to prevent and to control epidemics, which are active in the councils of the districts and counties. These commissions are headed by the district or county physician. The members of the commissions are appointed by the chairman of the given local council on the recommendation of the particular head.

Article 11

(1) In the National People's Army, the border units of the German Democratic Republic, and other protective and security organs attend to the tasks, rights and duties defined in this law to prevent and control contagious diseases through positions designated by the minister in charge.

(2) The Minister of Health and the Minister of Land, Forestry and Foodstuffs issue certain rules to protect from transmission of diseases from animal to man and from man to animal.

Article 12

The State Health Inspection is responsible for setting, coordinating and controlling the measures to protect from and control contagious diseases. It also supports the state and leading economic organs and industries to observe their responsibility in the framework of this law.

Article 13

The district and county councils carry out the measures to protect from and control contagious diseases in their territories. They decide on a territorial plan for the control of epidemics.

Article 14

(1) To insure hygienic conditions, and to avoid and eliminate sources of infection danger, suitable, planned measures have to be undertaken by the state organs and in the industries.

(2) The heads of state organs and of industries are required to introduce suitable protective measures without delay and to inform the local State Health Inspection as soon as a source of infection danger is recognized.

(3) The ministers, and the heads of other central state organs responsible for the industries in which special regulations and principles are in effect to protect from contagious diseases, issue a framework for health regulations in agreement with the Minister of Health. Based on this framework of health regulations, the heads of the particular industries institute the health regulations.

(4) The heads of industries in which health regulations have to be instituted insure that the workers are informed, in a documented fashion, about their duties in the field of health and protection from contagious diseases before they are employed, transferred to another job, changes in the conditions at the workplace, and also at regular intervals and in the case of special events. The heads must insure that the workers have the knowledge, in this area, which is required for carrying out their activities.

Fourth Section: Conduct Requirements to Prevent and Control Contagious Diseases

Article 15

(1) Every individual who knows that he has a reportable communicable disease, or that he is suspected to be ill, infectious, or suspects to have been infected, must submit himself to a physical examination without delay and, in appropriate cases, to medical treatment, and must agree to hospitalization.

(2) Every individual who assumes that he himself or a member of his household is ill from a reportable communicable disease has to report it to a physician or to the State Health Inspection.

(3) Every individual who learns of facts which favor the development of communicable diseases has the right and the duty to inform the State Health Inspection.

Article 16

(1) Individuals under the care of a physician or who are subject to special protective measures are required:

- a) to follow the medical regulations and to give informations to the health worker,
- b) when requesting medical help, to relate the possibility of infection or the suspicion of illness,
- c) on request from the physician or the State Health Inspection, to furnish proof of the medical examination or treatment,
- d) to follow the regulations set up by the local State Health Inspection.

(2) Every individual, when required by a physician, must report without delay to the appropriate State Health Inspection a change in the locality where he lives, in his address, in his place of training, in his workplace, or his acceptance into a community in which individuals live or spend time together.

(3) Individuals ill or suspected to be ill from a reportable communicable disease, who must be considered infectious or are suspected to be infected and who--because of their professional activities or training--can infect other individuals, may practice their professional activity or may participate in the training only when it is medically certified as unobjectionable. If ability to work is present, this worker can be transferred to another required work where there is no danger of spreading the disease, temporarily, until the unobjectionable medical certification can be issued, but no longer than a 6 month period.

(4) If a worker, as a result of special protective measures according to article 8, paragraph 2, is prevented from carrying out his tasks at the agreed upon worksite, he is required to perform another job, to which he is transferred by the industry or by the local state organ, at the same or at another location.

(5) For the temporary transfer to another job at the same or at another location, as a result of protective measures according to article 8, paragraphs 1 and 2, regulations according to articles 84 and 88 to 90 of the labor code are applicable.

Article 17

(1) If a worker in a right-to-work labor law relationship, for reasons named in article 16, paragraph 3, can no longer practice his previous activity because of prolonged unsuitability for that type of work, the factory has to offer him another, compatible job in the factory or, when this is not possible, in another factory.

(2) For members of socialist production associations, artisans, tradesmen and other, self-employed citizens, and also citizens who are not in a right-to-work relationship, who may no longer exercise their professional activity for reasons named in article 16, paragraph 3, and for whom no other activity commensurate with their abilities and knowledge can be found within their workplace, the labor office at the home location of the individual has to arrange a job commensurate with his abilities and knowledge.

(3) To ward off dangers of general infection and to control epidemics, the Minister of Health can decide that workers occupied in the state establishments

If the health and social system will be transferred temporarily to another unit, for up to 6 months, at the same or at another location, or to the same unit at another location.

Article 18

(1) If protective vaccinations and other protective practices as well as additional existing protective and control measures should cause health damage, the afflicted is entitled to compensation according to legal regulation.

(2) In the case of medically certified work disability which is in causal relationship to protective vaccinations and other protective measures, disability payments as in quarantines must be granted.

(3) Objects which are not state property and which, as a result of disinfection or control of health noxa, or of other protective and control measures ordered, are destroyed or lowered in value, or can no longer or can only partly be used for their original purpose or another purpose, restitution according to legal provisions has to be rendered upon request.

Section: Preventive Measures Against Communicable Diseases

Article 19: Measures in Communal Settings and Food Establishments

The directors of communal settings, especially accommodations for children, schools, health accommodations and vacation camps as well as food establishments including communal kitchens guarantee the maintenance of special preventive measures against communicable diseases, based on legal requirements.

Article 20: Protective Vaccinations and Other Protective Practices

(1) To prevent, control and eradicate communicable diseases in man, protective vaccinations and other protective practices must be carried out.

(2) Protective vaccinations or other protective practices can be decided on by the Minister of Health as voluntary or compulsory measures. They can involve the entire population, the population of a certain territory, certain populations groups, individuals, and also those entering, leaving and traveling through the country.

(3) For reasons of local protection against infection, the district physician, as head of the district commission to prevent and control epidemics, can order protective vaccinations and other protective practices with the consent of the Minister of Health.

(4) The protective vaccinations and other protective measures can be carried out only with state tested and approved vaccines and other medicines by health specialists legally permitted to do so. The prescribed procedures for protective vaccinations and other protective practices must be followed conscientiously.

(1) Required protective vaccinations and other protective practices are free of charge.

Article 21: Health Education

Through purposeful information and health education, the citizens must be made capable to effectively support the carrying out of measures to protect from and control contagious diseases. In this, significant effort is expended by physicians and other workers of the health system as well as by members of the German Red Cross of the German Democratic Republic.

Article 22: Medical Care for Chronic Excretors

(1) To protect society, individuals who are chronic excretors of the pathogens of special, communicable diseases are under personal and professional limitations according to the legal provisions. Through sympathetic consultations and regular medical care, the personal stress of chronic excretors must be minimized.

(2) Individuals who are chronic excretors of the pathogens of special communicable diseases must be issued suitable living space by the appropriate state organ on the request of the State Health Inspection.

Article 23: Working with Pathogens and Experimental Animals

(1) To protect health and life, the stipulations determined by the Minister of Health and the measures for safety and supervision taken by the organs involved are applicable to:

- a) working with pathogens,
- b) working toward purposeful genetic alteration of microorganisms,
- c) working to build and use new types of combinations of nucleic acid molecules (in vitro recombination of genetic material),
- d) the raising and upkeep of experimental animals, and the handling of and working with these for microbiological diagnostics and research.

(2) The chiefs of establishments in which work according to paragraph 1 is carried out guarantee the conscientious observance of the regulations and safety measures.

Article 24: Sterilization, Disinfection and Control of Health Noxa

Through the measures of sterilization, disinfection and control of health noxa, a further spread of pathogens has to be effectively countered. The prescribed procedures for sterilization, disinfection and the control of health noxa are to be carried out according to regulations.

Sixth Section: Measures to Control and Protect From the Spreading of Contagious Diseases

Article 25: Reporting

(1) To report contagious diseases which must be reported, responsibility belongs to:

- a) every examining and treating physician,
- b) chiefs of establishments and laboratories which perform a bacteriological, virological, parasiteological, pathologic-anatomical or radiological diagnosis,
- c) everyone occupied with the care or tending to the health of the individuals,
- d) directors of nurseries, kindergartens, schools, homes, boarding schools, homes, homes for trade pupils and other communal establishments,
- e) those in charge aboard ships, airplanes or other public, long distance travel accommodations,
- f) leaders of travel groups.

Those listed as duty-bound under the letters c to f can abstain from reporting if they determine, or if they have to assume according to the circumstances, that the physician had sent in a report or when the duty to report is assigned to the physician alone.

2) Reports must be sent by those required to do so to the County Health Inspection at the location where the patient is staying, without delay, at the latest within 24 hours after having learned of the illness, unless a special procedure is spelled out in other legal regulations. Reports according to section 1 letters e and f must be sent to the proper Traffic Health Inspection of the Medical Service of Traffic Affairs of the German Democratic Republic.

Medical Examination

Article 26

(1) Only physicians are permitted to conduct the examination and treatment of individuals who are ill, suspected to be ill, infectious or suspected to have been infected.

(2) Other individuals permitted to undertake medical examination and treatment must immediately arrange for examination by a physician if the symptoms or observations indicate the presence of a communicable disease.

(3) In specially defined cases and under certain conditions, the attending physician can instruct persons mentioned in paragraph 2 to undertake individual examinations and therapeutic procedures.

Article 27

(1) If a physician is called to an individual suspected to be ill or if he is invited by such an individual, examination to clarify the diagnosis has to be immediately made or arranged for.

(2) If, in a case of death, a contagious disease is suspected, the physician must arrange for an autopsy without delay.

Inquiries

Article 28

(1) The physician must question the ill or suspected to be ill individual in detail about the possible source of infection and about individuals who could have been infected by him.

(2) The physician is required to inform the chief of the proper State Health Inspection about any significant results of the inquiry and, on demand, to release to the chief any useful information and the required particulars about the examination, his findings, the medical treatment and also the measures initiated by him.

Article 29

(1) The local State Health Inspection will immediately conduct inquiries as a basis for protective and control measures.

(2) The chief of the local State Health Inspection can enlist the help of appropriate specialists or can commission them to conduct certain inquiries at the location.

Article 30

The state organs, the service stations of the German People's Police and the heads of industries support the local State Health Inspection, on demand, with inquiries and with carrying out controls.

Protective Measures

Article 31

The physician has to

- a) make the decision about the necessity of hospitalization,
- b) carry out or instigate necessary, temporary, immediate measures to avoid the spreading of a contagious disease when he concludes that an individual is ill, suspected of illness, or is infectious or that a case of death from communicable disease is present,
- c) instruct individuals under medical treatment or observation about the necessary conduct and the obligations when treatment is initiated, in the presence of infectiousness and after the elimination of infectiousness.

Article 32

(1) The local State Health Inspection

- a) calls forth the necessary protective measures to avoid the spreading of communicable diseases,
- b) distributes printed information to insure hygienic conditions and to remedy noted deficiencies, and sets precise time limits for it.

(2) A medically ordered absence from the workplace or from the place of training, because of the danger of infection, is also valid when the order to stay away is issued by the chief of the local State Health Inspection on the basis of special protective measures according to article 8, paragraph 1.

(3) Among protective measures involving objects and conditions, the one which is indeed effective is valid as the more responsible irrespective of personal property rights.

Article 33

(1) To diagnose communicable diseases, the chief of the local State Health Inspection can provide medical examinations to persons who are urgently suspected of illness, are infectious or are suspected of having been infected, in one of the examination or treatment centers designated by him.

(2) The chief of the local State Health Inspection can order the in-patient examination and treatment of an individual who fails to carry out his obligation to have himself be examined and treated, declines a medically ordered examination and treatment measure or removes himself from such, or who will not comply with a referral for in-patient treatment, in a state establishment designated by him.

(3) The chief of the local State Health Inspection has to suspend his order as soon as its purpose has been achieved.

Article 34: Social and Professional Measures

(1) Workers who are infectious have to be assigned to such workplaces that, when required protective measures are followed, other individuals will not be endangered. These workplaces are determined by the head of the factory jointly with the factory physician and the factory union leadership.

(2) For those individuals living in homes and in other communities, who are infectious, shelters and modes of living have to be provided in such a way that they will not endanger others.

(3) The local State Health Inspection supervises the tentatively assigned workplaces and also homes and communal establishments, oversees the measures taken and takes the steps necessary to protect from an infection.

Seventh Section: General Definitions

Article 35: Decisions

(1) Decisions to invoke the measures to protect from and to control communicable diseases according to articles 2 and 3, and article 32, paragraph 1, have to be made in writing. They must contain information about the legal provisions, the reasons have to be given and they have to be handed or mailed to the afflicted.

(2) If an urgent decision must be made and the immediate, written decree is not possible, the decision can be related by mouth through the control officer of the State Health Inspection. It has to be followed by a written confirmation from the chief of the local State Health Inspection within 3 workdays.

Article 36: Coercive Measures

(1) Should individuals fail to attend to their obligations according to article 15, paragraph 1, or should those responsible fail to fulfill their obligations arising from decisions in accordance with article 32, paragraph 1, letter a, article 33, paragraphs 1 and 2, if they delay or obstruct the performance of measures ordered or to be taken, or if they remove themselves from under these, the measures can be enforced by the local State Health Inspection. The expenses incurred have to be assumed by the violator.

(2) The chief of the State Health Inspection of the Ministry of Health, the chiefs of the district and county Health Inspections, in order to carry out the decisions according to article 32, paragraph 1, can set coercive fines of up to 50,000 M against industries and up to 5,000 M against individuals. The amount of the fines is to be determined by considering the importance of the measures and the degree to which duty was violated, in the case of industries, also the effect on the funds.

(3) The use of coercive payment must be preceded by a written warning. The warning must contain:

- a) the exact specification of the handling which is to be coercively enforced,
- b) the grace period during which the handling should be accomplished,
- c) the amount of the projected coercive payment.

The coercive payment can be repeatedly invoked when decisions are not carried out. The repeated fining has to be again preceded by a warning.

(4) After the grace period, the coercive fine is determined according to article 3, letter b. The imposition of a coercive fine must contain information about the legal measure. The coercive fine must be paid within 3 days after arrival of the decision.

(5) The costs and the coercive fine can be executed administratively. The statute of limitation is 1 year.

Article 37: Complaints

(1) Complaints against injunctions can be submitted according to article 32, paragraph 1, letter b, against orders according to article 33, paragraph 1 and 2 and article 34, paragraph 3, against decisions according to article 35, paragraphs 1 and 2 and against the setting of coercive fine according to article 36, paragraph 2.

(2) The complaint has to be submitted in writing or orally, stating the reasons, within 2 weeks after receipt of the decision, to the organ where the decision

was made. The complaint has to be resolved within 2 weeks after its submission. If the complaint is not or is not fully allowed, it has to be sent to the supervisory organ within this time period. The submitter has to be informed of this. The supervisory organ has to make a final decision within an additional 2 weeks.

(3) If, in exceptional cases, a decision can not be made within the allowed period, a tentative decision including the reasons and the expected date of the final decision has to be issued in due course.

(4) The complaint has no postponing effect.

(5) Decisions about complaints have to be made in writing, have to be explained and have to be handed or mailed to the submitter of the complaint.

Eighth Section: Punishment and Fine Determinations

Article 38

(1) One who intentionally violates the measures concerning

1. sterilization, disinfection and the control of health noxa according to article 24,
2. the work with pathogens and experimental animals according to article 23, paragraph 2,
3. protective vaccinations and other protective measures in man according to article 20, paragraph 4,

and thereby negligently causes a direct danger to the life or health of people, will be punished by public reprimand, fine, probation or loss of freedom for up to 2 years.

(2) One who intentionally causes a direct danger to the life or health of people through his action, will be punished by loss of freedom for up to 5 years.

(3) One who negligently causes considerable health damage or death to an individual, through his action, will be punished with loss of freedom for up to 8 years.

(4) The attempt according to paragraph 2 is punishable.

Article 39

(1) One who negligently engages in some action mentioned in article 38, paragraph 1 and thereby negligently causes considerable health damage, will be punished by fine, probation or loss of freedom for up to 2 years. If the death of a person was caused by negligence, loss of freedom for up to 2 years or probation are mandatory.

(2) A more serious case is present if

1. several people are killed or
2. the action was based on ruthless violation of the measures of this law.

In serious cases, the perpetrator will be punished with loss of freedom from 1 to 5 years duration. If the conditions of numbers 1 and 2 are also applicable, loss of freedom can be extended to up to 8 years.

Article 40

(1) One who intentionally or negligently

1. fails to fulfill the injunction spelled out according to article 32, paragraph 1, letter b,
2. as chief of a laboratory, fails to introduce the required measures according to article 14, paragraph 2, and fails to inform the local State Health Inspection,
3. fails to comply with the information reporting requirements according to article 16, paragraph 2, article 25 or article 28, paragraph 2.
4. in opposition to the medical orders and measures, acts contrary to the obligations according to article 16, paragraph 1, or the legal prohibitions according to article 16, paragraph 3, fails to subject himself to the compulsory measures according to article 20, fails to comply with the referral for medical examination according to article 26, paragraph 2 or fails to fulfill the obligations according to article 31,
5. hinders the inquiries and protective measures according to article 29, paragraph 1, article 32, paragraph 1, letter a, or fails to fulfill the obligations according to article 16, paragraph 1, letter d,
6. violates the measures in articles 23 and 24 of this law and the measures exempted to carry out work with pathogens, genetic materials and experimental animals, and also sterilization, disinfection and the control of health noxa,

can be given reprimand or a fine between 10-500 M.

(2) One who intentionally

1. fails to let himself be examined or treated by a physician in spite of repeated invitations, although he knows that he suffers from a reportable communicable disease or the suspicion of such a disease is present or an infection is produced,
2. as an infectious individual, removes himself from in-patient care ordered by a physician or by the state, or leaves the hospital without permission.

can be reprimanded or given a fine between 10-500 M.

(3) A fine of up to 1,000 M can be levied if, in case of an intentional order violation according to paragraphs 1 and 2,

1. greater damage was caused or could have been caused, or
2. the societal interests were grossly disregarded, or
3. state or public order and security was considerably influenced, or
4. it was committed while striving for profit or was repeated within 2 years of another violation resulting in fine.

(4) In the case of lesser breaches of regulation according to paragraphs 1 to 3, the employee who is empowered to supervise the local state organs can issue reprimands and fines between 1-20 M.

(5) Carrying out the disciplinary procedures of the regulations is the duty of the county or district physicians or of the chiefs of the local State Health Inspection.

(6) Disciplinary procedures of the regulations must be carried out and disciplinary measures must be levied according to the 12 Jan 1968 law on controlling breaches of regulations-OWG-(GBI. I No 3 p 101).

Ninth Section: Concluding measures

Article 41

The Council of Ministers and the Minister of Health issue the legal orders required to carry out this law.

Article 42

(1) This law takes effect 1 Mar 1983.

(2) Simultaneously, the following become invalid:

the law of 20 Dec 1965 to prevent and control communicable diseases in man (GBI I 1966 No 3 p 29),

the first procedural measure of 11 Jan 1966 to the law to prevent and control communicable diseases in man--Special protective measures--(GBI II No 13 p 51),

the second procedural measure of 27 Feb 1975 to the law to prevent and control communicable diseases in man--Protective vaccinations and other protective procedures--(GBI I No 21 p 353),

the numbers 12 and 42 in the appendix to the law on adaptation, 11 June 1968 (GBI I No II p 242),

the number 7 in the appendix to the law of 24 Jun 1971 on New composition of regulations concerning legal means against the decisions of state organs (GBI I No 3 p 49),

the number 23 in the appendix to the law on adaptation, 12 June 1968 (GBI II No 62 p 400).

(3) Until new regulations, the following remains valid:

the third procedural measure of 25 Jan 1966 to the law to prevent and control communicable diseases in man--Work with pathogens of communicable diseases--(GBI II No 16 p 83).

247)

CSO: 5400/3003

DANGEROUS TB RECRUDESCENCE AMONG YOUTH

Athens ELEVETHEROTYPIA in Greek 19 Jan 83 p 10

[Excerpts] Tuberculosis is spreading slowly but steadily among the young generation. The number of tuberculous adolescents under treatment went from 602 in 1967 to 700 in 1978, and a similar rising trend has been noted also in the latest 4-year period.

On the other hand, people 30-39 years old show impressive declines in the number of tuberculosis cases within the same time span. Specifically, tuberculous patients in this age group decreased in number from 1,395 in 1976 to 436 in 1978.

These two contrary tendencies for tuberculosis in Greece serve to prove indisputably that: This sickness not only has failed to be eradicated along with the rise in the standard of living and with the new chemotherapeutic and other very expensive anti-tuberculosis programs, but on the contrary upon being suppressed among the older age groups it now threatens to take its revenge on the younger people.

The tuberculosis specialists reply to the survey by the ELEVETHEROTYPIA by warning that even though cases of tuberculosis among young children and adolescents are still rare, they reveal chinks in our defensive armor. We should not be worrying about today, but about tomorrow. They assert that if these chinks grow larger and if our resting on our laurels continues, we may find ourselves faced with an endemic outbreak of tuberculosis in Greece, which will set it back a quarter of a century.

In our country, from 1976 on the two epidemiological indices which assess the frequency of the disease, the mortality and the morbidity, ceased to move in parallel, and now they are going in opposite directions. The mortality is decreasing, and the morbidity is increasing. The special index of morbidity for men shows that the Koch's bacillus has displayed particular preference for men, who are afflicted with a frequency more than three times that of women.

With its fresh reappearance, the mycobacterium of tuberculosis still has the lungs as its invariable point of attack, and it shows shifting preferences with respect to the various age groups. It strikes primarily adolescents up to 19 years old, followed by young adults 20 to 29 years old. An increased morbidity is also seen among the older age groups. This is a reminder of the fact that tuberculosis continues to infect and live as a parasite within people for their entire lives.

The finding that persons more than 65 years old, especially males, constitute a group which has a high morbidity from pulmonary tuberculosis is in line with international data. Of course, this does not mean that the elderly show a greater susceptibility or predisposition for the mycobacterium of tuberculosis. It is simply the case that they have been infected in the past, when the disease was more frequent, and they are manifesting it now, after they have grown older.

No Diagnosis Made

Despite the fact that the special index of morbidity for both sexes shows an increase, the incidence as calculated underestimates the true morbidity of tuberculosis in our country. In a significant number of cases no diagnosis is made, and a number of new cases which are treated in private clinics or by private doctors do not get reported. At the same time, the number of persons who are attended to in the anti-tuberculosis infirmaries is greater than that of those who are treated in the sanitariums. The obligatory reporting of tuberculosis cases is violated both by the sufferer's own family circle and also by the doctors. The customary social stigma attached to this disease is holding its ground in the mentality of the Greek person.

The impressive decline in the mortality, as well as the number of treated patients who are cured of tuberculosis in the sanitariums, is due to the discovery and implementation of effective therapeutic methods. At the same time it suggests the importance of the anti-tuberculosis drugs and the preventive measures against tuberculosis.

But in spite of all the advances which have been made, specialists point to inadequacies in the pharmacological handling of certain cases. The head of the Pneumatological Clinic of Sotiria Hospital, K. Kamaroulis, said in this connection to the ELEVHEROTYPIA that:

"There are patients who are resistant to certain drugs (streptomycin, ethambutol, rifampicin, PAS [para-aminosalicylic acid]), and these need other derivative anti-tuberculosis drugs. Such drugs are not available. They used to be on the market in Greece, a number of years ago. Beginning in 1978, we set in motion efforts to have them be returned to the Greek market. We appealed both to the State and to the pharmaceutical companies, to no effect.

"Thus, such patients who are in need of these drugs have reached the point of importing them from abroad. The most important of these drugs are cycloserine and ethionamide."

The Studies

Out of a total of 10 geographic regions of the country, the region of Thraki along our border has captured first place with respect to the index of morbidity, with second place going to the region containing the capital area.

In both the indices of incidence and of prevalence, Thraki has manifested a steady tenacity in holding first place as compared to the other regions, and

Crete pursues the same tenacity in the same time periods in remaining at the nadir of the measurements. It holds last place, with the lowest index of morbidity.

The Frequency of Tuberculosis

A professor of epidemiology and biostatistics at the Athens Medical School, G. Papaevangelou, spoke to the ELEVTHEROTYPIA on the frequency of the disease in Thraki, saying:

"The region of Thraki shows a peculiarity. In examinations which were made in all the regions on the percentage of persons having sputa which registered positive for Koch's mycobacterium, Thraki showed a small index of positive sputa. Despite the high frequency of the disease in this area, the index of positive sputa was 20 percent. In contradistinction to this, in the region of the capital, where the frequency was lower, the index of positive sputa was 30.5 percent. And in an unexpectedly large percentage of 99 percent of those suffering from active pulmonary tuberculosis throughout all the nomes in the country, the victims had not been vaccinated previously with the anti-tuberculosis vaccine BCG [bacillus Calmette-Guerin]."

The increase in the resistance of the organism which is achieved with this vaccine restricts the field of attack of the disease to young persons. There are no contraindications to this vaccination. By law, since 1980 it has been mandatory that this anti-tuberculosis vaccine be administered in the fifth and sixth grades of elementary school.

Specific categories of vendors (bakers and so forth) and people who have dealings with the public are given a special X-ray examination of their lungs. But it is not always immediately efficacious, in that the X-ray picture cannot always show that the radiographic shadows are due to tuberculosis.

12114

CSO: 5400/2513

BRIEFS

LOAN FOR HEALTH FACILITIES--THE regime has received a loan of \$26.4 million from the Inter-American Development Bank through its Fund for Special Operations to construct and equip several health facilities. The project provides for the construction of these health facilities and for extensions to be made to some existing ones. It is also envisaged that there would be an acquisition of X-Ray equipment and/or ambulances to be used at the new health facilities. The government is entertaining bids for tenders for the supply of the ambulances and X-Ray equipment, with the deadline being January 17, 1983. At present the medical services of the nation are in a sorry state. Vital equipment are either in short supply at hospitals or conking out when needed. The regime is now scrounging around the world to see what it can obtain to help stave off a total collapse of the medical services. Minister Van West Charles has promised a "better service" in 1983. [Georgetown MIRROR in English 12 Dec 82 p 4]

PUBLIC HEALTH PLAN--TWENTY-THREE more Public Health Inspectors will be trained and subsequently employed by the City Council during next year, Mayor Mavis Benn noted in her weekend mayoral broadcast. Cde. Benn pointed that approval for this move had been given at the Council's recent budget meeting. The Mayor lamented the fact that the public-health department was short-staffed, although the Council was "making every effort to have persons developed an interest in this field." This has been unsuccessful to date. She noted that areas without public health inspectors were listed as--1. Kingston and Thomas Lands; 2. Bourda, Queenstown and Charlestown. 3 Industrial Site, Laing Avenue, Yarrow Dam, West Ruimveldt Estate, Alexander Village, West Ruimveldt and Riverview Ruimveldt. 4 Tucville (South), Festival City, North, South and East Ruimveldt; 5 Meadow Brook Gardens, East La Penitence, Tucville North, Guyhyhoc Park and Gardens and Roxanne Burnham Gardens. 6 Campbellville, Blygezight, Lamaha Gardens and Subryanville. 7 Cummings Lodge, Grahams Hall, Atlantic Ville Turkeyen, Liliendaal, Bel Air Park, Bel Air Springs and Bel Air Gardens. 8 Bel Voir Court, Prashad Nagar and Campbellville Housing Scheme. The Mayor stated that District Public Health Inspectors from the closest areas to these districts would answer complaints and serve notices. [Georgetown GUYANA CHRONICLE in English 21 Dec 82 p 1]

MEASLES DEATHS--Georgetown, Mon., (CANA)--Three children have died as a result of an outbreak of measles in Kaikan, a small settlement on the right bank of the Guyuni River, the Guyana Ministry of Health has said. The Ministry added that of the 31 children living in the area, 28 have contracted the disease. Since the outbreak of the disease (which the Ministry says is not German measles) several weeks ago, a medical team has taken drugs to the area in an effort to contain the spread of the virus. "The children who died had developed other complications such as pneumonia," the Ministry said. Last outbreak of measles here occurred just over two years ago. The Ministry said it was continuing its immunisation programme. [Text] [Port-of-Spain TRINIDAD GLEANER in English 11 Jan 83 p 5]

-0: 5400/7537

HONDURAS

BRIEFS

GASTROINTESTINAL DISEASE STATISTICS--Tegucigalpa--Dr Alberto Guzman, chief of Epidemiology in the Ministry of Public Health, reported yesterday that 1982 ended a period of high incidence of diarrheal disease. During that period alone there were more than 300,000 cases of gastroenteritis throughout the country. However, the doctor explained, it is gratifying to note that, since the beginning of the oral rehydration program last April, more than 146,000 children have received this treatment. He said that, after observing the great acceptance of the litrosol program by the Honduran people, the Secretariat of Health authorities are negotiating for the purchase of a machine that will be able to produce it more easily at low cost, since the National Children's Foundation sells everything to this ministry at the rate of 30 centavos to the lempira. If this idea materializes, electrolytes will be available for sale in stores, pharmacies, or other places that are convenient to the Honduran people. This will prevent the death of many children. [Text] [San Pedro Sula LA PRENSA in Spanish 11 Jan 83 p 16] 8255

CSO: 5400/2043

INHABITANTS OF TAOURA HIT BY ONCHOCEROSIS

15121 in FRATERNITE MATIN in French 9 Dec 82 p 11

Article by permanent correspondent Birias Balogoun: "Population of Taoura Threatened by Onchocercosis"

Text: The population of Taoura, a little village of 2,000 inhabitants located about 20 kilometers from Korhogo, is being endangered by onchocercosis. Indeed, all the activities of these villagers take place on the banks of the Bandama where there is fertile land. Out of 140 persons who underwent examination by rural health service physicians, 89 percent are affected by this eye disease with 5 percent irreversible eye involvement; even the children have not escaped. Such is the case of little Beh Silué and Kolocholona, aged 7 years.

"We visit the villages on a regular basis for detection sessions," explained Dr. Kuyo, the rural health official in Korhogo. "This is our fourth session in Taoura." The rural health official is accompanied by Dr. Soro, some health development agents, and by Miss Yéo Ténénan, who is defending her thesis. The point of this fourth detection session was to see whether onchocercosis has any effect on dentition. For it has been noted during examinations that 35 percent of onchocercosis patients have dental caries. Should it be concluded that there is a relationship between the two diseases? Miss Yéo's research results will clarify this.

Each time the medical teams visit the villages, patients with cysts are directed to the CHR [expansion unknown] in Korhogo, or the major endemic diseases as published. The rural health agents also take the opportunity of inspecting for leprosy, bilharziasis, and tripanosomiasis. "Sometimes," explains Dr. Kuyo, "we find leprosy, but no trypano yet."

The cysts are generally located around the ribs and the hips, but on the forehead sometimes. Then a sample is taken from the patient for an examination under a microscope. If the result is positive, the patient is recognized as infected with the disease, and is given treatments. If the patient's eyes are affected, he can no longer be saved; blindness will occur. Microfilaria are minute larvae which travel throughout an individual's system and settle in the optic nerves. According to Dr. Kuyo, if the patient is discovered early

can be saved. The first symptom of the disease is usually itching. At that point the affected person can consult a health center.

Rural Disaster

For the villagers, this disease is a natural disaster that they dare not fight. It is thought to be the work of wizards or evil spirits. But that is not the opinion of rural health officials, who are holding many health awareness and information meetings. At the start, Dr Kuvo stressed, the villagers were reticent and refused consultations. "Now everyone comes running up as soon as we get here, because they are all aware of the danger."

The rural health official pointed out that there is still no preventive vaccine for onchocercosis, but the vectors can be fought by spraying DDT over the infected land, however.

In Fangué, the elderly headman of Taoura village, is worried about the future. "I am asking the rural health services as well as the proper authorities to help us fight this scourge," for if the uneasiness persists, the able-bodied will leave the village. The consequences of the scourge are indeed grave. They may be reflected in production and cause a rural exodus problem. In social terms, there will be a delay in the improvement of the villagers' standards of living. According to Mr Amidou, a health development official, the peasants lack proper information. "They still have certain old habits that we must try to eradicate by presenting them with the facts."

To do so, Mr Amidou is proposing an awareness and information campaign, through the use of the local languages on television and radio, for anything given out over the radio is very important and taken seriously by the peasants. The number of health development agents in the area should also be noted. In the near future 10 will start service in the apartments in Korhogo, Boundiali, and Perké.

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5400/115

GOVERNMENT READY TO INITIATE MAJOR HEALTH PROJECTS

Kingston THE DAILY GLEANER in English 21 Jan 83 pp 1, 15

(Excerpts)

PRIME MINISTER Edward Seaga yesterday announced several major projects, aimed at improving the island's health services, and to be undertaken by the Ministry of Health in the coming financial year. Among them is the possibility of using the Forum Hotel as a Type 5 Clinic to take care of the health needs of the Portmore area of St Catherine.

The projects are: the start of work on the building of the Comprehensive Health Centre, Slipe Road, Kingston, at a cost of \$3.1 million; the upgrading of the Denham Town Health Centre to a Type 3 at a cost of \$700,000; and the renovation of the Edna Manley, the Hagley Park and Rollington Town clinics.

After the completion of these projects, priority will be given to the building of a new Government Medical Laboratory and the relocation of the public morgue.

With regard to the Kingston Public Hospital, the Prime Minister said there were still problems to be faced at the old wing. There was need for an air-conditioning unit at the operating theatre and the equipment would be provided in the next financial year.

Water tanks would be installed in the coming financial year to offset problems in water supply. There was need for a consistent source of supply, so that the hospital would not suffer from shortfalls in times of drought, hence the provision of tanks.

He mentioned Government's efforts to restore the health institutions to "levels of normality as a matter of priority" with the provision of \$40 million over three years for that purpose. The programme, he said, was on target and at the end of the second year, they would have completed two-thirds of the assignment. In the third year, greater attention would be given to the provision of equipment for hospitals.

Efforts have been made to deal with other aspects of the health services and, according to the Prime Minister, as a result of the recruitment programme, every hospital had at least one doctor. The recruitment of medical staff over the last couple of years had proceeded in such a manner "that today we are nearly at the full complement of staff in terms of doctors in the hospital service".

He said there was still a shortfall in the nursing staff due to the reduction in the intake of nurses at the training schools.

Major problems still to be dealt with were the Bellevue Hospital and the unsettled differences in the nursing ranks. He said he was asking nurses to remember that while the differences were of importance to their career status, there was always the need to put the welfare of the less fortunate first.

He spoke too of the problem of administration of hospitals, a matter which he said ought to be attended to urgently. The Government would support the hospital boards in their efforts "to tie up the loose ends". Mention was made too of the problems with staff and the accountability of supplies. There was need to ensure that the supplies reached the sick, he said.

PLANS NOTED FOR IMPROVING WATER SYSTEM IN WEST

Kingston THE DAILY CLEANER in English 6 Jan 83 p 11

[Text]

The National Water Commission, in a move directed at improving the water supply system in Western Jamaica, has embarked on massive upgrading and improvement work on the existing scheme, JIS reported on Tuesday.

New pumps, are being installed and commissioned, pipelines are being changed, new and bigger bore mains are being introduced, pumping and relift stations are being built and reservoirs and treatment plants are being put in place.

In Hanover there are plans to upgrade the Logwood Scheme which produces some three million gallons of water daily and serves a population of approximately 14,000 people.

Although five pumps are now operated at this scheme, the design capacity is inadequate, resulting in a distribution problem which affects Lucea in par-

ticular. It is against this background that the scheme is to be upgraded.

Also in Hanover a new 5,000 ft. pipeline costing some \$200,000 has been installed through the Round Hill property, with water being fed through this line from the Great River source. A new pump has been commissioned at the Great River plant, and this will greatly increase the source's efficiency.

In Westmoreland, the water supply to Sav-la-mar has been upgraded with the laying of a new line through Petersfield, branching at Hartford, then going into the town. The Bullstrough Water Supply has also benefitted by way of new mains. Further upgrading is planned for the scheme and will include the installation of reservoirs and a comprehensive treatment plant.

St. James is to come in for substantial im-

provement under the current programme.

In Spring Gardens, Tower Hill and Belmont, new mains are being put in and a new pumping station is being built at Tower Hill. Major improvements are to take place at the Reading Plant. New pumps and a new clear water pump are to be installed while the capacity at this plant is to be increased from 1.25 to 2.25 million gallons of water per day.

Elsewhere in St. James, improvement work is now being done to the Chelsea and Irwin Bush sections of the Montego Bay water supply while pumping units are being installed at Niagara, Vaughnsheld and Appleton Spring.

The maintenance budget of the National Water Commission in Western Jamaica is approximately \$9 million and over 300 people are employed

BRIEFS

MOSQUITO ERADICATION--The Ministry of Health has reactivated its Mosquito Eradication Programme, aimed at ridding the island primarily of the *Aedes* *Egypti* and *Anopheles* species which are the carriers of dengue and malaria, respectively. The Minister of Health, Dr Kenneth Baugh, said in an interview that emphasis would be placed on "source reduction," with the first phase of the programme being a public education drive to inform members of the public of how to rid their surroundings of mosquito breeding grounds. "Householders are advised to dispose of old tyres, cans, bottles and other containers in which water can settle," Dr Baugh said. Phase two will see ground-spraying of swamp areas and "fogging" islandwide. "We are using ground spraying, as research has proven that aerial spray has in some cases encouraged a resistance in the mosquito to the insecticides used," the Minister said. [Text] [Kingston THE DAILY GLEANER in English 20 Jan 83 p 2]

CSO: 5400/7538

INCREASE IN LEPROSY BECAUSE OF REFUGEES REPORTED

Karachi DAWN in English 21 Jan 83 Magazine p I

[Article byNajma Sadeque]

[Text] Two-thirds of the new cases that are being detected are of Afghan refugees--the impact of which was first felt in 1980. Today the infectivity has more than doubled.

In olden-day Europe a leper was bound to ring a bell when he went out into the street to warn off people that he was passing through so that they could make themselves scarce. Unkind as this may seem, one could not entirely blame society as then neither did people know that leprosy was curable nor were distinctions made between infectious and non-infectious varieties.

Until today, through the lifelong dedication of two women doctors — Dr Pfau and Dr Zarina Fazalboy — leprosy in Pakistan had been completely controlled.

Not only had the awareness that they promoted ceaselessly, diligently, paid off so that increasing numbers came forward voluntarily for treatment, the record-keeping of patient treatment and history is as prodigious and meticulously detailed as is the relentless watch on patients so that they do not interrupt or discontinue treatment for lack of self-interest or

carelessness, a tendency that is often there.

If statistics show there are more cases at present than before, it is not that the incidence of leprosy among Pakistanis is rising but because that more have been brought to attention more easily — they were always there.

However, that is not the only reason. There is every fear now that this happy trend may be reversed. In fact, a "sieve action" seems to have begun already — the more locals that are being cured, the more outsiders, carrying infectious leprosy, seem to be pouring in, in droves.

That in itself is not a matter of concern since these self-same doctors under the wing of the Marie Adelaide Leprosy Centre have such a highly-organised leprosy monitoring and treatment network going. But then, dealing with leprosy also depends on awareness and willingness to be treated. And that, unfortunately, from the wave of leprosy-afflicted patients crossing over our borders, is not really forthcoming.

With the coming of the Afghan refugees, cases started trickling down from Peshawar while others were detected in Quetta and Manghopir.

In Baluchistan two-thirds of the new cases that were being detected were of these re

refugees. Previously infectivity accounted for about 24 per cent of the cases, now it is 56 per cent: more than doubled.

This uncountable trend of leprosy is a threat not only because of being infectious in kind but also because the leprosy-attending health workers are being deterred in their task. One would think that the job would be simplified since most refugees are ensconced in camps, more so because the camp commandants are extremely cooperative. But the problem, and a very serious one at that, is that the inmates are not.

Apart from the reluctance to admit to an illness that still cries "taboo!" although facilities for cure or control are available, keeping records and follow-up of treatment is almost impossible with those wont to answer to different identities at different times with multiple passports.

The doctors express the possibility and willingness to at least tend to the stable inmates — women, older and disabled men and children — but even this is being resisted. The menfolk will not permit other than women to attend to their womenfolk, and there are scarcely any female leprosy health workers around available for the purpose.

Leprosy has more or less been a runaway problem in Afghanistan. There is a Leprosy Department there, largely on paper. In 1966-67, before there were such pressing political problems, the Afghan Govern-

ment had requested Dr Pfau to train their personnel for the control of leprosy. Unfortunately the language barrier arose. The personnel offered spoke only Farsi, and even for on-the-job training the Pakistani trainers would have had to be able to speak Farsi too.

The only way out was for the Afghan personnel to come with a working knowledge of English or Urdu or at least any of the local languages. But nothing transpired thereafter.

All Dr Pfau managed was to impart basic training through lectures and demonstrations. The West German Government had started two clinics in Afghanistan but with the opening up of hostilities and the conditions constantly fraught with risk to life and limb, they had no option but to pull out.

Not that there is no solution. There are funds available. Funds that can establish hospitals where leprosy patients can be housed or quarantined until the disease is brought under control. But unfortunately donors are less concerned about the threat of leprosy than about the hands into which funds to fight it have to be delivered.

It is a job few others apart from missionaries will gladly take up, and an unhealthy concern paranoia towards missionaries continues to exist. Even though leprosy control is owed so much to them. Perhaps under the blessings of the W.H.O., there may be a way out. We hope.

OFFICIAL INAUGURATES LEPROSY INSTITUTE

Karachi DAWN in English 26 Jan 83 p 8

[Text]

Prof Basharat Jazbi, Adviser to the President on Health said yesterday the Government was keen to assist in measures to control leprosy in Pakistan.

Inaugurating the Training Institute for Leprosy at the Marie Adelaide Leprosy Centre, he said the establishment of a home for the handicapped accommodating 25 patients in a family atmosphere of mutual help and cooperation, was really a noble venture.

It was a matter of great pride that the President of Pakistan had accorded recognition to the Centre as a training institution for Leprosy for which necessary building and additions have also been completed to suit the requirements, he said.

Voluntary agencies who have initiated the Leprosy control programme in Pakistan deserve to be congratulated on their continuing efforts towards this end, he added. He said that Leprosy control, services in Pakistan constitute multi-purpose multi-faceted programme.

About patients of leprosy in Pakistan he said 79 per cent were still under treatment and out of these about 60 per cent were concentrated in urban areas of Karachi.

He said that the migration of refugee population has played a major role in leprosy problems of Pakistan. However, due to socio-economic conditions, the leprosy control programme covered only two third of the population.

He noted that Marie Adelaide Centre was providing subsidy on medicines, transport, training facilities and professional advice and guidance in the leprosy control

programme, and had provided free treatment to over 10,000 leprosy patients besides 407 T.B. patients.

Referring to the prevention of blindness programme being undertaken by the Centre, he hoped that such multi-purpose programmes would also be carried out in other places in Pakistan.

Earlier, Dr. Thomas, in his welcome address, said that leprosy in Pakistan shows a markedly focal pattern with bulk (66 per cent) of leprosy patients in Karachi.

He said, till Dec 31, 1981, the Centre had a total registration of 21,533 patients of whom 17,068 were still receiving active treatment.

He stressed that leprosy work should not be restricted to Karachi alone because the patients were also originating from other provinces.

He said with the establishment of this training institute it will be possible to conduct courses in subjects allied to leprosy, e.g. physiotherapy, laboratory and social work. Supervisory course for the district leprosy controllers supervisors can also be conducted, he added.

Speaking on the occasion, Dr. Ruth Pfau, Honorary Adviser on Leprosy to the Ministry of Health, made an impassioned plea for giving the leprosy technicians their rightful place alongside the other para-medical staff.

Dr. Jazbi assured that the Government will give due consideration to the problems of leprosy technicians and other related para-medical staff.

He said that President Mohammad Zia-ul-Haq had given special instructions to solve the problems of the para-medical staff.

MEDICAL RELIEF BOARD SET UP IN SIND

Karachi DAWN in English 19 Jan 83 p 6

[Text]

the Governor of Sind, Lt Gen S.M. Abbasi, yesterday established the Sind Medical Relief Board to formulate policy for specialised treatment to needy patients within the country or abroad, says an official handout.

Headed by the Governor, the Board will consist of Ministers for Health and Social Welfare as official members, one representative each from Karachi, Hyderabad and Sukkur Divisions as non-official members nominated by the Provincial Government, and the Secretary, Social Welfare Department, who will be the Secretary of the Board.

A fund with an initial grant of Rs 1 million to be supplemented by donations from philanthropists was announced in the budget.

Other functions of the Board notified yesterday are:

- To formulate policy for specialised treatment of helpless patients within the country or abroad;
- To examine and approve cases for specialised treatment;
- To constitute medical board or boards for of persons seeking specialised treatment;
- To receive moneys, financial grants and donations;
- To arrange specialised treat-

ment of any such patient in the country or abroad directly or through any body or agency;

- To arrange foreign exchange for treatment abroad of any patient;

- To give grants-in-aid to any patient for specialised treatment or any other purpose incidental or ancillary thereto;

- To ensure that grants given are utilized for the purpose and in accordance with the object for which they are given;

- To set up an executive committee with such duties as it may assign;

- To delegate powers to the executive committee or Secretary of the Board; and

- To do generally all such acts and things as may be necessary and conducive to the attainment of its aims and objects.

The notification lays down that the moneys in the fund may be invested in such a manner and kept in such bank as may be approved by the Board.

The fund shall be utilised for specialised treatment and any other incidental or ancillary thereto.

According to the notification the accounts of the fund shall be

maintained by the Secretary of the Board in accordance with the rules for the time being in force.

The accounts of the fund shall be audited once in every financial year by the Accountant General Sind, or his nominee.

Procedure for applicants

According to the notification, applications for specialised treatment shall be made to the Secretary Government of Sind, Social Welfare Department and Secretary of the Board.

The applicants will give details about the ailment, duration of the disease and give other necessary particulars.

The Secretary of the Board shall examine each application, and being satisfied with the genuineness of the case shall refer the matter to the medical Board.

The Board shall have a secretariat headed by the Director, Social Welfare, who shall be assisted by Deputy Secretary (Technical) Health Department and Deputy Director, Medical Social Work Unit, besides other officials.

HIGH DOCTORS' FEES RESENTED; DEVELOPING INDIGENOUS MEDICINE EMPHASIZED

Karachi MORNING NEWS in English 26 Jan 83 p 4

[Editorial]

[Text] THE physicians charging inordinately high fees from the patients have once again been warned by the Provincial Health Minister, Syed Ahad Yusuf. Speaking at the inauguration ceremony of a maternity home set up by the Hyderabad Metropolitan Corporation the other day, he said that "such state of affairs would not be tolerated any more." The Minister's concern and solicitude for the sick will certainly earn the gratitude of the ailing humanity and also of those concerned at the scramble for material gains in the society. Whether his warning will cure the doctors stricken with greed and rapacity is anybody's guess. Unfortunately for the health of the society, spiritual and physical, the privileged classes, including the physicians, have been pursuing their money-making business unmindful of the consequences such a thoughtless conduct would produce. All such people are in the habit of ignoring "warnings" because they are never followed by proper action by the Government. Such warnings, if one were to use a metaphor, are like blank cartridges fired at a beast of prey to keep it at bay.

It certainly lies within the competence of the Government to fix in precise terms the fees general practitioners, specialists or surgeons can charge from the patients. It should not be difficult to evolve a formula in this connection, taking into consideration a doctor's skill, his degree, local or foreign, and his standing in the profession. In a poor country like Pakistan, where a person in the middle class earns generally from Rs 1,500 to Rs 2,000 a month, the exorbitant fees of surgeons and specialists look fantastic, almost immoral. After all, there must be some co-relation between the paying capacity of an ordinary patient and the fees of a surgeon or a specialist. The exceedingly high fees charged by some of the physicians and all of the surgeons look all the more objectionable when viewed in the context of the huge expenses borne by the tax-payers to produce one medical graduate. According to figures available, Government spends from Rs 1,50,000 to Rs 200,000 on the education and training of one doctor. Every doctor is thus deeply in debt to the community. Obviously, fleecing the members of the community is not the best way of repaying that debt.

The ironical fact is that not all the specialists are really that competent. One often comes across people who were finally cured by a general practitioner after wasting much time and money over specialists. It is high time the specialists and the surgeons realised their moral responsibility that in curing a patient of his malady they must not cripple him financially in a way as to snatter his plan of educating a child or marrying a daughter. It is unthinkable that a specialist or a surgeon would have ever acquired the professional skill without being supported by the tax-payer. Indeed, there is every economic, legal, constitutional and moral reason for the Government to clamp down on the rapacious surgeons, specialists and physicians.

Responsibility for checking the fleecers in the medical profession also devolves on the Pakistan Medical Association which is in a way responsible for the national health. How would the common man benefit from the services of surgeons and specialists if their fees are beyond his reach?

As things stand today in Pakistan, it does not seem likely that the surgeons or specialists can be forced to be reasonable. But there is an alternative to provide health cover to the nation at a cheaper rate: by giving all-out official support and patronage to homoeopathy and Tibb, which are cheaper and more efficacious than the allopathic system.

It is proper time for the Government to take up the case of Tibb and homoeopathy in the right earnest because the Sixth Five-Year Plan--which lays great stress on health, specially in the rural areas--is to be launched from July next. The breakthrough achieved in providing full health cover to the nation by patronising Tibb and homoeopathy will also break the vicious hold of the rapacious ones in the ranks of allopaths.

CSO: 5400/4710

CALL TO RECOGNIZE IMPORTANCE OF GENERAL PRACTITIONERS

Karachi DAWN in English 22 Jan 83 p 8

[Article by Izharul Hasan Burney]

[Text] The College of Family Medicine Pakistan has urged planners to recognise the vital role of general practitioners in the context of national health policy and make adequate provisions for the same in the Sixth Five Year Plan.

The CFMP was preparing a paper on the subject for onward transmission to the Planning Commission and would be willing to "sit across the table" if so desired, Dr. S.H. Naqvi, President of the CFMP, said in Karachi.

Highly developed and technologically advanced countries were already shifting emphasis from specialities to GP and it was time "we learn from them and tailor our health strategy accordingly," he said in an interview.

Speciality status

Family medicine had already been accorded the status of "speciality" in Australia, the U.K. and some other Western countries.

Chairs of Family Medicine have also been created in the universities in India, Sri Lanka, Singapore, Malaysia and Saudi Arabia, he pointed out.

This emerged from the realisation of the fact that 50 per cent of the sick must and did report first to the GP for reason of easy access and within the economic reach of the masses, Dr Naqvi said.

An even more stronger reason was that "behavioural disorders, delinquency, violence, juvenile

and unhappy family life problems can only and best be helped and prevented initially by family doctors," he argued.

It was now universally acknowledged that "specialities have their place of excellence for diseased organs and damaged pathological processes of acute and chronic nature," Dr Naqvi said.

However, it was the family doctor who must step in first at the preventable stage and also after the patient had received specialist care in the hospital.

Big responsibility

"Indeed, the GP has to accept the responsibility from womb to tomb and must, therefore, be fully equipped to discharge this big responsibility," he observed.

This was the task for which the GP had to be specially prepared, Dr Naqvi said, adding that this was what had to be planned and worked for "methodically and scientifically."

Apart from the "significant improvement" in the state of our medical education, it would particularly need "life long compulsory continuing education, regular vocational training, and courses in practice of medicine."

In the West, this was sought to be achieved by declaring family medicine a speciality by itself. And this was the type of manpower for which chairs were being created in the universities in many countries, he observed.

It was more relevant to Pakistani conditions because we have not yet developed the referral system, he said.

"The vacuum has to be filled or the whole system would crumble as it has failed so far" — notwithstanding how much we spent on new hospitals and bed capacities, Dr Naqvi stressed.

Emotional maladjustments and psychological disorders being the core of many a problem among the youth — both male and female — and there being just 50 and odd psychiatrists all over the country, only the family doctors could come to the rescue and check "degenerative processes which develop into life-long illness," he opined.

Medical graduates

The President of the CFMP pointed out that the country was producing about 4,500 medical graduates a year.

Unless the bulk of this manpower was trained to take up its destined role, with choice and respectability, the Government would continually have the added problem of unemployment or under-employment on the one hand, and growing dissatisfaction on the part of the suffering humanity, on the other, he said.

"Solution of our health problems lies in its reorientation to our needs according to our health priorities, resources, public acceptability and social requirements", Dr Naqvi concluded.

PUNJAB CHILDREN TO BE VACCINATED

Karachi DAWN in English 22 Jan 83 p 4

[Text] LAHORE, Jan 21--All children up to the age of five years in the Punjab should be vaccinated against six diseases in two years so that the mortality rate among them is reduced. The Punjab Health Secretary, Brig. Manzoor Malik said while winding up a 13-day training work-shop for master-trainers here on Tuesday.

He said the Government allocated Rs. 150 million for this programme in two years, the current year's allocation being Rs 90 million. The World Health Organisation and the UNICEF were also collaborating by providing technical know-how and guidance and the training to the master-trainers. The entire staff of the communicable diseases control, including Assistant District Health Officer, Lady Health Visitors, vaccinators, sanitary inspectors etc. would be engaged in this programme in addition to their normal duties.

The Secretary Health said that the aim of the launching of the programme was that the mortality rate among children due to diseases like T.B., polio, measles, whooping cough, tetanus, diphtheria was not only reduced by controlled completely.

Vaccinators, he urged, should collect the necessary information about number of children from every village and motivate parents to bring them to the nearby basic health unit, rural health centre, dispensary or hospital for vaccination.

Workers showing excellent results in vaccination of children would be given monetary awards, he assured and called upon District Health Officers and other field staff to motivate the community health workers in achieving their targets. He said the success of the programme depended upon efficient and devoted performance of the health workers and the cooperation of community.

Earlier, Director Health Services, Punjab, Dr. Elahi Bakhsh Soomro explained the objects of the workshop and thanked the WHO and the UNICEF for extending full cooperation in arranging the workshop and imparting technical know-how to the participants.

BRIEFS

PUNJAB TO TRAIN 30,000 MIDWIVES--LAHORE, Jan 23--A massive programme to train 30,000 dais (midwives) has been launched to provide better health care to mothers and children in rural areas, so as to control the mortalities rate among them. In Punjab, about 12,000 dais (midwives) would be trained to attend to health hazards among children and mothers during and after the maternity period. These dais would also vaccinate children upto the age of five years, in rural areas, against diseases common among children. A review of the programme was made at a meeting, presided over by the Provincial Health Secretary. The Punjab Government will spend Rs. 15 crore during the next two years on the execution of this programme. The World Health Organisation and the UNICEF are also providing technical guidance and expertise. The overall objective of the programme is to check the mortality rate among mothers and children by providing better health care to them at their doorsteps. [Text] [Karachi DAWN in English 24 Jan 83 p 6]

TUBERCULOSIS ERADICATION PLAN--Lahore Jan 15: The programme to eradicate tuberculosis from Pakistan till 1990 has been finalized and it will be approved by the general council of the National T. B. Association in its meeting here on Jan 21. Representatives of the four provincial associations and T. B. specialists will participate in the meeting to be hosted by the Punjab T. B. Association. Punjab President of the Association, Mufti Zia-ul-Hasan on Friday presided over a meeting which devised the programme of the two-day meeting of the Federal Association. The meeting also nominated 10 members to represent the Punjab Association in the national meeting. They are: Mufti Zia-ul-Hasan, Mian Fazal Ahmed, Khan Amanullah Khan Niazi, Syed Mehboob Hasan Shah, Brig Qayyum Sher, Syed Ali Shah Bukhari, Dr Ahmed Saghir Ansari, Dr R. M. Yasmin, Mr Samson Manoha and Chaudhry Mohammad Ismail. [Text] [Karachi DAWN in English 16 Jan 83 p 4]

CSO: 5400/4709

MINISTER NOTES PROGRESS IN PREVENTING, CURING HEPATITIS

Beijing RENMIN RIBAO in Chinese 20 Jan 83 p 3

["How to Realize New Progress in Preventing and Treating Hepatitis, Minister of Health Cui Yueli [1508 2588 3680] Answers Questions Posed by Reporters from the Central Television Station, the Jiankang Bao and This Paper"]

[Text] Question: Recently, we received many letters from the masses seeking answers to questions concerning the prevention and treatment of hepatitis. Could you talk about this.

Answer: Viral hepatitis is a disease which has attracted widespread attention in the world's nations in recent years. It has become a social health problem in the world's nations at present. In many regions in the world, the number of incidences has been high, and our nation also belongs to a region with a high incidence. Because viral hepatitis is still a communicable disease that is relatively difficult to prevent at present, the Ministry of Health has included it as a disease to be prevented and treated in a key way, and the State Scientific and Technological Commission has also included it as a subject of study.

Question: Why do you say that hepatitis has already become a social health problem?

Answer: Hepatitis has become a social health problem because of the following considerations: 1. The number of cases of hepatitis is large. In the communicable disease hospitals in the provinces and cities, the number of hospitalized patients suffering from hepatitis constitutes over half of the total number of hospitalized patients suffering from communicable diseases. 2. Among children and young people, there are also many suffering from hepatitis. This affects the health and labor production force of the second generation. 3. Among hepatitis patients, there is a fairly large number suffering from chronic hepatitis. These chronic hepatitis patients are not cured quickly, they suffer recurrences of the disease, their health is affected more and the economic loss is also greater. 4. The paths for propagation of hepatitis are many and this has brought about a definite difficulty in prevention and treatment. There is another point worth noting, that is, some mothers suffering from hepatitis B can transmit hepatitis to their babies.

Question: Is it true that in recent years, the number of patients suffering from hepatitis in some areas has increased?

Answer: This is not entirely so. 1. Since liberation, our nation has conscientiously implemented the principle of "taking prevention as the main effort", and actively launched the work to eliminate pests and eliminate diseases. Among communicable diseases, there are also many acute communicable diseases, such as measles, diphtheria, epidemic encephalitis, polio which have greatly lessened. But because there still is no effective way to prevent and treat hepatitis at present, the percentage of occurrence of the disease at the localities are not uniform, some in some areas and low in other areas. 2. As our nation's medical and health services develop, many hepatitis patients who did not seek medical treatment or who were not diagnosed as such in the past have now been diagnosed. Especially during the past ten years, because of progress in medical sciences, many new serological methods of diagnosis have been established. A large number of epidemiological surveys have discovered that in an ordinary group of people, besides hepatitis patients, there are also large numbers of carriers who do not show any symptoms, they are what is commonly called "Australian antigen" positive people. Therefore, the social influence of hepatitis has evidently increased in recent years and it is normal that it has attracted the attention of all.

Question: What are the future plans for strengthening prevention and treatment?

Answer: When treating diseases, we have always implemented the principle of "taking prevention as the main effort". Hepatitis is no exception. When we come to hepatitis, we now generally divide it into three types, type A, type B, and the non-A and non-B type. There are different emphases in the methods of preventing them. Let me first talk about hepatitis A.

Hepatitis A is a communicable disease of the intestinal tract and it enters through the mouth. It mainly occurs in children and young people. It occurs mostly at localities such as farm villages where health conditions are poor. Among many hepatitis A patients also suffer from jaundice, a majority can recover by themselves and the disease will not become chronic hepatitis. Recovery with hepatitis A can produce immunity.

Continuously practicing environmental sanitation, food sanitation and personal hygiene well is an important measure to prevent hepatitis, especially hepatitis A. We hope all localities can join the patriotic health movement, continuously protect water sources, disinfect drinking water and treat excrements to render them harmless. We must sanitize drink and food well and guard the "mouth from which the disease enters." The "sanitation law for the People's Republic of China (trial)" recently promulgated must be conscientiously observed by all of us. Each locality must also conscientiously strengthen sanitation management of market places, child care agencies and elementary schools.

Question: We just talked about the prevention of hepatitis A, then how do we prevent the hepatitis B?

Answer: Hepatitis B is transmitted mainly via transfusion, injections and close contact in life. There are also the problems of chronicity and carriers. Therefore, its prevention not only includes those measures to prevent hepatitis B, we must especially emphasize the following problems: 1. We must solve the problem of transmitting hepatitis by medical and health agencies. We know that medical equipment used in hospitals can transmit hepatitis, for example, if sterilization is not thorough, it is possible to transmit hepatitis through injections, acupuncture, and surgery. Therefore, medical and health agencies must conscientiously do the work well in sterilization and quarantine. When injecting medicine or giving inoculations, one needle and one syringe must be used for only one person and they should be sterilized after using once. We must also actively create conditions to treat garbage, sewage, pollutants and render them harmless, and we must strictly control the occurrence of cross infection. 2. We must strengthen management of blood donors. Every blood donor should be subjected to strict physical and laboratory examination. Only those who have passed can be allowed to donate blood to guarantee that hepatitis is not transmitted by transfusions and by blood products.

Also, "Australian antigen" positive people should not directly work with foods and in child care.

Question: In general, what work should be done well to prevent and treat hepatitis? What do you think is the future in preventing and treating hepatitis in our nation?

Answer: Although hepatitis is a disease that has a high occurrence and that is fairly dangerous, we need not fear hepatitis. As long as we strengthen prevention and treatment, implement many measures, it is completely possible to control the occurrence of the disease below a relatively low level. At present, prevention and treatment of hepatitis must grasp the following tasks:

1. Now, all localities throughout the nation are profoundly learning the spirit of the Party's 12th Congress, and are launching activities of "five stresses and four points of beauty", and building up the socialist spiritual civilization. Health work is an important part of the spiritual civilization. Strengthening the buildup of the spiritual civilization must start out from sanitation and "filth" must be solved first. Each locality must conscientiously launch the patriotic sanitation movement. Water must be improved and excrements must be controlled, food sanitation and personal hygiene must be practiced well.
2. Sanitation in the prevention and treatment of hepatitis must be strengthened. There must be special people responsible for this work. A certain number of specialized people must be added to concretely launch this work.
3. Many ways must be used to widely propagate knowledge about sanitation among the people, and especially to young people and students so that the masses can grasp relevant methods of prevention.
4. Each locality must concretely strengthen the work of sterilization and quarantine in medical and health agencies, strengthen the propagation of medical sources of hepatitis, and control the occurrence of cross infection.
5. The scientific research forces in the prevention and control of hepatitis must be organized well, they must cooperate well, must bring out the key points, overcome the situation of scattered and scattered subjects.
6. Research and development of vaccines

against hepatitis must be hastened. Now, our nation has already preliminarily developed a vaccine from a blood origin for hepatitis B. It is being used under observation among a small group of people. We must also hasten the study of the hepatitis A vaccine, arrange for the production of highly efficient and high value immunoglobulin. We must also exert a lot of effort to study the use of genetic engineering to prepare vaccines. 7. On the foundation of studying the mechanism of occurrence of the disease, we must quickly find effective remedies to treat severe cases and chronic hepatitis and methods to change the "Australian antigen" to negative.

Our nation's party and government have always cared about the health of the masses of people. With the principle of "taking prevention as the main efforts", with organized people, with sound medical and health organizations, with close cooperation between departments, we will surely realize new achievements in preventing and treating hepatitis. I believe, as long as we lift up our spirits, it is entirely possible to reduce the occurrence of hepatitis by a large scale.

9296

CSO: 5400/4123

LARGE HOSPITALS URGED TO HELP SMALL HOSPITALS STRENGTHEN SERVICES

Beijing JIANKANG BAO in Chinese 26 Dec 82 p 1

["A New Practice By the Health System of Xicheng Ward in Beijing City, Large Hospitals Help Small Hospitals Strengthen Services, the Ministry of Health Believes This is a Good Way to Create a New Situation in Urban Medical Work"]

[Text] The Health Bureau of the Xicheng Ward in Beijing City organized three large hospitals in the ward to help small basic level hospitals strengthen services, improve the level of management and the quality of medical treatment, fully developing the function of basic level medical facilities. Minister of Health Cui Yueli [1508 2588 3680] believes this is a good way to create a new situation in urban medical work, and it is very beneficial to solving the problems of urban residents who have difficulty getting medical treatment and being hospitalized for illness.

At present, most medical personnel of basic level hospitals in Beijing City generally have a low professional standard, medical equipment is deficient and out-dated. Treatment wards are insufficient, facilities have been neglected and lacked repair for many years, thus, the potential has not developed well, and this has affected patients seeking nearby medical treatment, and it has also created an imbalance in the number of patients seeking medical services at large hospitals and small hospitals. To solve this problem, the Beijing Municipal Bureau of Health began a test in Xicheng Ward in August of this year. The Bureau of Health of Xicheng Ward called the First Subsidiary Hospital of the Beijing Medical College, the subsidiary People's Hospital and the Jishuitan Hospital together, drew up a plan to help strengthen services of ward level hospitals and neighborhood hospitals on the basis of surveys and research, and gradually implemented the plan. The measures they implemented were the following:

They accepted basic level medical personnel to pursue further studies, they held learning classes, they trained basic level medical personnel.

These three hospitals relaxed their regulations, arranged for 25 doctors from basic level hospitals to pursue further studies in the near future. At the same time, the First Hospital of the Beijing Medical College held classes in communicable diseases and isotopes. The People's Hospital held learning classes in radiology. The Jishuitan Hospital held learning classes in emergency treatment, emergency rescue and geriatrics, and trained basic level medical personnel.

They admitted basic level medical personnel to participate in internship at their own hospitals. The First Hospital of the Beijing Medical College printed and distributed the schedule of the hospital's monthly academic activities to the basic levels so that they could participate in learning in time.

The hospitals arranged for the old doctors of the basic levels to participate in doctor's visits at the hospital and in case discussions. The First Hospital of the Beijing Medical College admitted the doctors of osteology and gynaecology of the Second Hospital of Beijing City to participate in case discussions at the hospital, visiting patients by department heads and observation of surgery and such activities. The People's Hospital led the surgeons of basic levels in performing surgery and they participated in pre-surgery and post-surgery observations and treatment.

They organized old doctors to go to the basic level hospitals to participate in group consultation or to participate in discussion of difficult cases. The people's Hospital selected and assigned physicians and surgeons in charge to go to the basic level hospitals at fixed intervals each week to conduct clinical lectures. The Jishuitan Hospital organized old doctors to go to the basic levels at fixed intervals. The department of internal medicine assigned one doctor to go to the three basic level units each week in rotation to provide outpatient treatment and participate in group consultations. The surgical department organized a small team to help basic levels develop outpatient surgery. The pharmacy, physical examination department and the radiology department also took action to help basic level units improve technique.

They made the system of transfer for treatment and for hospitalization sound.

The First Hospital of the Beijing Medical College and the People's Hospital further made sound the three-ticket transfer of treatment system starting from November. The basic level hospitals were ordered to write on the three-ticket transfer slip the purpose and requirements for transfer of treatment of those patients who truly need to be transferred for treatment. The outpatient clinic of the First Hospital and the People's Hospital assigned old doctors to establish special wards and be in charge of treatment. Clear diagnosis of patients transferred back to the basic levels was issued and treatment plans were proposed.

They helped basic level medical treatment units add and maintain medical equipment. The People's Hospital and the Jishuitan Hospital cleaned up accumulated materials and held an exhibition to let associated basic level hospitals select and use them. The inspection and repair groups of these two hospitals also maintained and calibrated medical equipment for the basic level hospitals.

They helped basic level hospitals set up wards. This method not only improved the technique of medical treatment at basic level hospitals, it also solved the needs of the patients and eased the shortage of hospital beds in large hospitals. For three months, the People's Hospital helped Fusuijing Hospital set up 25 hospital beds, and admitted basic level nursing personnel to learn the experience of nursing in hospital wards. The Jishuitan Hospital also helped Dewai Hospital set up 14 hospital beds, assigned old doctors to participate in group consultation and inspect the wards at fixed intervals and help manage the wards well.

At present, these three general hospitals are further perfecting various measures so as to more effectively help basic level medical units strengthen services.

MEASURES TAKEN TO ELIMINATE ILLNESS IN ENDEMIC DISEASE AREAS

Beijing JIANKANG BAO in Chinese 30 Dec 82 p 1

[Article by Liu Yongqing [0491 3057 1987]: "Eliminating Illness of Peasants in Endemic Disease Areas, Party and Administrative Leaders of 14 Provinces, Cities and Autonomous Regions Go Deeply into the Disease Areas to Direct Work to Remove Fluorine and Improve Water"]

[Text] To eliminate the illness of the broad peasant masses in endemic disease regions, our nation's 15 northern provinces, cities and autonomous regions where work is being carried out to prevent regional fluorine poisoning have grasped the implementation of preventive and control measures since the beginning of this year. Preventive and control work has made new progress. Now, already 10 provinces, cities and autonomous regions have completed the task of the general survey, and they have completed the stage of experimentally remove fluorine and improve water and have entered the stage of improving water in larger quantities. This has increased the population being benefited by 300,000. The masses said: "After drinking the water that has been cleared of disease, we do not worry that our offspring will be harmed anymore!"

After the meeting of the leading groups on the prevention and control of endemic diseases of the Central Committee of the Communist Party of China was held, 27 provinces, cities and autonomous regions throughout the nation established plans to prevent and control fluorine poisoning. The Shaanxi Provincial Committee issued a document asking that the construction of water sources in places where the population is concentrated and where there is a serious shortage of water and in areas severely affected by endemic fluorine poisoning be taken as a key task so that every locality where new water sources have been established will be benefited. Now, more than 1.6 million yuan in investment have been spent. The investment created 6,873 projects to eliminate fluorine and improve water in 21 counties and prefectures. They will enable more than 100,000 people and more than 10,000 head of livestock to use qualified low fluorine water.

Within the past year, over 40 leading party and administrative comrades of 22 provinces, cities and autonomous regions conscientiously heard reports on the situation of endemic fluorine poisoning in their own regions, and they discussed together with comrades of all the localities plans to eliminate fluorine and improve water, and studied how to solve existing problems. From the end of last

year to the present, 23 leading party and administrative comrades from 14 provinces, cities and autonomous regions went personally to the diseased areas to command the work of preventing diseases and improving water. This greatly pushed forward the development of the work to prevent and control endemic diseases. Group leader Han Jingcao [7281 0513 5430] of the leading group of the provincial committee to prevent and control endemic diseases and secretary of the Hunan Provincial Committee of the Communist Party of China went to 4 prefectures and cities and 13 counties at the beginning of this year to conduct surveys, visited the masses of patients and families, held panel discussions with specialized personnel, concretely guided the work to eliminate fluorine and improve water, and determined 66 villages in 7 prefectures including Anyang and Zhoukou that were severely affected and arranged 100 engineering projects to improve water.

9296

CSO: 5400/4123

SURVEYS OF DISEASE OUTBREAK, IMMUNIZATION CAMPAIGN

Campylobacterosis Outbreak

Beijing ZHONGHUA LIUXINGBINGXUE ZAZHI [CHINESE JOURNAL OF EPIDEMIOLOGY] in Chinese
Vol 3 No 6, Dec 82 pp 326-327

[Article by Chen Kangchuan [7115 0073 1557] et al of Fujian Provincial Research
Institute of Epidemiology]

SUMMARY It was only in the past decade that the jejunal subspecies of campylobacteria was discovered to be an important pathogen of human diarrhea and some cases have been reported in all the 5 continents. In China, there were reports of its occurrence in Wuhu (1980) and in Shanghai (1981). The authors discovered some victims of campylobacterosis in Huian County of Fujian in the winter of 1981. A 12-year old girl was brought to an outpatient clinic with fever and diarrhea; examination, analysis, and culture of the blood and mucus containing stool produced one strain of the jejunal subspecies of campylobacteria. The girl recovered a day after the terramycin and TMP treatment. An epidemiological survey revealed that in her village on the seaside pigs, chickens, ducks, and sheep were allowed to roam freely in the vicinity of the well which was the source of drinking water. Among her family members, one more victim and one healthy carrier of the disease were discovered. The positive rate in the chickens was found to be 27 percent, but the pathogen was not isolated from the other domestic fowls. Chickens of one chicken farm were reported to have a carrier rate as high as 58 percent in Shanghai.

Purified Polysaccharide Vaccines

Beijing ZHONGHUA LIUXINGBINGXUE ZAZHI [CHINESE JOURNAL OF EPIDEMIOLOGY] in Chinese
Vol 3 No 6, Dec 82 pp 328-330

[Article by Xu Caihua [6079 2011 5478] et al of Sichuan Provincial Public Health and
Epidemic Prevention Station]

SUMMARY In Mar 80, 120,000 inhabitants of Dazhu County, Sichuan Province were inoculated with purified polysaccharide epidemic meningitis vaccine as an emergency measure. The inoculation rate of the population was 95.7 percent and the rate of successful immuno-protection was 80.67 percent. No abnormal reaction was observed. Incidence of epidemic meningitis of the inoculated group was 28.96/100,000 inhabitants and that of the control was 149.84. Serum agglutinating antibody GMT of the groups before inoculation and one week, 2 weeks, and a month after inoculation are compared and reported. The epidemic meningitis-A freeze-dried polysaccharide vaccines were supplied by the Research Institute of Biological Products Ministry of Public Health. Diluted in saline solution, the vaccine contains 150 μ g/0.5 ml of purified epidemic meningitis antigen.

Zibo City Immunization Programs

Beijing ZHONGHUA LIUXINGBINGXUE ZAZHI [CHINESE JOURNAL OF EPIDEMIOLOGY] in Chinese
Vol 3 No 6, Dec 82 pp 335-337

Article by Hu Zhaolie [5170 2507 3525] et al of Zibo School of Public Health
Medicine, Shandong Province]

SUMMARY This paper analyzes the effects of diphtheria, measles, and poliomyelitis immunization programs in Zibo City in 1950-79. Before general vaccination (1962) incidence of diphtheria in Zibo fluctuated at 0.14-198.28/100,000 inhabitants; in the period of 1962-75, it was gradually brought down to an average of 4.69; since 1975 there had not been a single case. Measles occurred to just about everybody before the general inoculation program (1967). In 1967-70, the rate fluctuated at 5.27-263.09. The less than satisfactory showing is thought to be perhaps related to the quality of the vaccine and the percentage of immunized children. The rate of complications from measles has been obviously reduced and there was not a single fatal case in 6 of the 13 years since the adoption of the measles vaccination program. The rate of poliomyelitis had dropped from 4.65 before the start of the oral vaccine program (1968) to 0.74 in 1979. There was not a single fatal case in these 12 years. At present, there are still weak links in measles prophylaxis. The paper suggests that the quality of vaccines and the inoculation procedure must be improved to raise and maintain the immune level, measles patients should be quarantined, and a surveillance system should be established to carry out measles etiological, serological, and epidemiological surveys and studies. Vaccines used in the immunization program are described.

6248

CSO: 5400/4115

PEOPLE'S REPUBLIC OF CHINA

BRIEFS

XINING NUTRITIVE LEVEL IMPROVED--According to the data provided by the Public Health Department, the average quantity of calories needed by a Xining resident per day is about 2,600 kilocalories. As revealed by an investigation conducted among staff and worker families in Xining, the quantity of calories absorbed by a person a day was about 2,500 kilocalories in 1981, 4 percent lower than the quantity needed but 14 percent higher than that in 1964. The quantity of calories absorbed has been further increased in the first three quarters of 1982. Compared with the data obtained in 1964, the quantity of calories absorbed from grain has now decreased by 11 percent, whereas that absorbed from other foodstuffs increased by 7 percent. The percentages of milk, poultry and vegetable oil in the food composition have remarkably increased. [Xining Qinghai Provincial Service in Mandarin 1100 GMT 10 Jan 83]

CONGRESS OF PUBLIC HEALTH WORKERS--"The Guangdong Provincial Congress of advanced collectives and individuals in public health work opened in Guangzhou this morning. This was the biggest gathering of outstanding workers in public health work in our province in the past 23 years." More than 340 representatives attended the congress. "Vice Governor Yang Kanghua spoke at the opening ceremony. He pointed out: Doing a good job of public health work has a direct bearing on the realization of the general task in the new period. It is hoped that the broad section of medical and public health workers will unfold a vigorous campaign for emulating, learning from, catching up with, helping and in turn surpassing each other, being bold in conducting reform and making innovations and striving to achieve a fundamental turn for the better in medical work style, reaching or surpassing the highest standard in the quality of treatment and nursing in their own units and creating a new situation in public health work. "The Ministry of Public Health sent a cable of congratulations to the Congress of Advanced Workers." [Summary] [HK250337 Guangzhou Guangdong Provincial Service in Mandarin 1000 GMT 24 Jan 83]

001 4400/4124

PRIMARY HEALTH CARE CENTER PLANNED BY UNIVERSITY

Kingston THE DAILY GLEANER in English 3 Jan 83 p 15

[Text]

The University of the West Indies is to establish a centre for Primary Health Care in St. Lucia with a grant of U.S. \$782,508 from the W.K. Kellogg Foundation. The grant was negotiated by the University's Faculty of Medicine, which will also be responsible for its administration. The grant is being made available in three parts, the first and largest of which was received in October 1982. The second and third parts will be handed over in 1983 and 1984 respectively.

Speaking about the project, Dr. Samuel Wray, Dean of the Faculty of Medicine, said "The Faculty of Medicine has long recognized that the small states of the Caribbean have special difficulties where the provision of better health care is concerned, and so we have made this very practical effort to provide primary health care facilities in St. Lucia, and clinical services for the people of St. Lucia and the region as a whole."

This project, a major contribution by the Medical Faculty to the training, research and health care needs of the non-campus territories, is aimed at providing

high standards of primary health care

well-trained allied health workers to augment the existing teams

planning and management in the team approach to primary health care

research into the most rational and productive methods of delivery care

a resource centre to which the non-campus territories may turn to solve health care problems which they have themselves identified

a source of educational material to develop and improve skills

a primary health care centre that would be much more accessible than any other within the region and which upholds standards of excellence

a source of new attitudes and approaches to primary health-care problems.

The Centre will be housed on a 9-acre site called the Moine Complex which was previously used by a Medical research team from the Rockefeller Foundation. The Complex, along with its maintenance, are the contribution of the Government of St. Lucia to the project.

MODEL

"Primary health care is only one aspect of a three-component project which includes, firstly, the establishment of the St. Lucia-UWI Morné Complex; secondly, the selection of four existing Government health centres in St. Lucia for upgrading so as to provide an interlocking primary health care service; and, finally, the provision of fellowships for client states' health workers to come to St. Lucia to train and to observe at the Centre," Dean Wray says.

Antigua, Belize, Dominica, Grenada, Montserrat, St. Kitts Nevis and St. Vincent will all be sending health workers to train in St. Lucia.

Funding for the establishment of the interlocking health care service is now being negotiated by the Faculty of Medicine. The service is to be set up as a model for similar services in other territories.

Pre-registered doctors, medical students and Residents in Family Medicine from the Medical Faculty at Mona will be required to go to St. Lucia for part of their training. The Department of Social and Preventive Medicine is also considering including time at the St. Lucia Primary Health Care Centre in their courses of study.

The Kellogg Foundation has, by this grant and another to the Department of Social and Preventive Medicine, contributed some US\$1.4-million to the Faculty of Medicine, and through the Faculty to the people of the region as a whole. By providing the funding to expand and improve training and services in the areas of family medicine and primary health care, the Foundation is helping the region to move positively towards the global goal of "Health for All by the Year 2000."

BRIEFS

CHOLERA CASES--There had been 90 confirmed cholera cases in Transkei since the beginning of the year, Dr G Solleder, Deputy Secretary of Health, said yesterday. Two people had died from the disease since January 1. Dr Solleder said most of the cases were from the Umzimvubu District near Port St Johns and Mqandulu. No reports of cholera have been received from Ciskei. [Text] [Johannesburg SOWETAN in English 19 Jan 83 p 3]

CHOLERA FEAR IN E. TRANSVAAL--Local headmen of two resettlement areas in the Eastern Transvaal fear a new outbreak of cholera in the drought presently gripping the area is not broken. Despite good rainfall in the area recently, experts have warned that trouble is by no means over. Headmen of Zwelisha and Plenaar, north of Nelspruit told a SOWETAN team they feared another cholera epidemic like the one that swept through the country two years ago, killing scores of people. Daily, women and children can be seen queuing in the scorching heat for the only water available--a muddy and reddish trickle from huge drums, which are replenished from time to time. The SOWETAN team saw bucket-carrying women and children scrambling over each other in their haste to be first at the few communal taps available. One tap serves 100 families. [Text] [Johannesburg SOWETAN in English 19 Jan 83 p 1]

CHOLERA STRIKES KWAZULU--Suspected cholera cases treated in KwaZulu had shown a marked increase in January, health authorities reported at the weekend. Of 1,207 cases treated during the week ending January 24, 248 were confirmed and 88 deaths, the previous week 458 suspected cases were treated. Elsewhere in Natal cholera claimed another victim during the past week--a 63-year-old woman from Inanda. Her name was withheld. It was also announced that the first white person to have contracted cholera during the latest outbreak of the disease was being treated in the Newcastle provincial hospital. [Text] [Johannesburg SOWETAN in English 31 Jan 83 p 3]

NATAL CHOLERA CASE--Durban--The first White to be admitted to a Natal hospital with cholera, an 86-year-old Orange Free State farmer, Mr H.C. van Niekerk, is responding to treatment in the Newcastle Provincial Hospital. Mr Van Niekerk, who farms in the Memel district in the Free State, was progressing favourably, a spokesman for the hospital said yesterday. He was admitted last Friday and the Department of Health is still carrying out tests at his farm to determine how he contracted the disease. The number of cases in KwaZulu, attributed to the intense heat in the region, has increased drastically in the past few days. A spokesman for the KwaZulu Health Department estimated that about 120 suspected cases were being treated since the weekend. [Text] [Johannesburg THE CITIZEN in English 3 Feb 83 p 13]

RABIES DEATH IN DAR ES SALAAM

Dar es Salaam DAILY NEWS in English 13 Jan 83 p 3

[Article by Musa Lupatu]

[Excerpt]

A child died and three other people are admitted at the Muhimbili Medical Centre (MMC) after being bitten by a rabid dog in Dar es Salaam recently.

The head of emergency medicine at the MMC, Dr A. M. Barnabas, told the *Daily News* yesterday that the child, Adamu Omari of Magomeni, died at the hospital on January 8. He was bitten at Kinondoni area.

Dr Barnabas said the admitted persons, all women, were doing well after treatment. They were

also bitten in the same area and admitted at the hospital on January 10.

According to Dr Barnabas, the boy was bitten by a dog sometime in December last year but did not report the incidence to his parents until January 7 when he showed symptoms of the disease. The boy died the second day after admission at MMC.

Dr Barnabas appealed to city residents to beware of stray dogs and report immediately to hospital in case of bites by dogs.

BRIEFS

CHOLERA OUTBREAK--Four people died of cholera at Mkungwe village, Kibuko, in Mwanza division of Morogoro rural district a few days ago. The district chief medical officer, Dr (Temba), said that as a result of the outbreak of the disease two treatment centers have been set up at Mkungwe and Kawa and 39 people are undergoing treatment. The district chief medical officer also said there was an outbreak of cholera at Munga Mkole, Ngerengere, where 10 people had been attended; however, there were no deaths. [Excerpt] [EA020144 Dar es Salaam Domestic Service in Swahili 1300 GMT 1 Feb 83 EA]

MEASLES EPIDEMIC ABATES--The number of children who have died of measles in (Kashishi) Village, Urambo District in Tabora region now stands at 21. The regional commissioner of Tabora said in Urambo today that the epidemic, which broke out during the second half of last month, has now waned. News from the area states that a team of doctors and nurses led by the Urambo District medical officer, which had camped in the area where the disease broke out, has not returned to Urambo after the epidemic abated. The residents of the district have been urged to take their children to health centers whenever they see symptoms of the disease, one of which is fever. [Text] [EA060203 Dar es Salaam Domestic Service in Swahili 1300 GMT 5 Feb 83]

DYSENTERY DEATHS--More than 100 people died of vomiting and dysentery in Tunduru District, Ruvuma Region, between April and December last year. The Area Commissioner, Captain T. J. Kasapila, told SHIHATA, in Songea that about 4,000 people were treated during the period after an out-break of the disease in the area. Captain Kasapila said so far 93 out of 96 villages have been attacked by the disease. Those not affected are Tinginya, Mkwela and Kalulu. [Excerpt] [Dar es Salaam DAILY NEWS in English 19 Jan 83 p 3]

CSO: 5400/141

BRIEFS

COPPERBELT CHOLERA ERADICATION--Cholera has been wiped out in the Copperbelt Province and the medical authorities have expressed satisfaction at the last case which was diagnosed on December 24 last year at Ndola Central Hospital. "We have not come across any other case since last year. We are satisfied there are no more cases to worry about," said Dr. Ganu. But, he cautioned members of the public to be constantly alert "even when there is no outbreak of the killer disease in the province." During the latter part of 1982, few cholera cases were confirmed in Mufulira and Ndola hospitals. The patients "imported" the disease from Luapula Province where many people had died from the disease.--Zana. [Text] [Lusaka DAILY MAIL in English 14 Jan 83 p 3]

ITT ANTI-SCHISTOSOMIASIS CAMPAIGN--ITT Zambia is in the process of compiling data for a research project aimed at eradicating snails which spread bilharzia, a company spokesman has said. ITT has staked K40,000 for the anti-bilharzia campaign and is working in conjunction with the Ministry of Health to combat the disease. He said officials from Lusaka Urban district council were in the field examining different species of snails and their results would be made known in April when the project is re-enforced by a group of experts from Britain. [Excerpt] Lusaka TIMES OF ZAMBIA in English 19 Jan 83 p 2]

BRIEFS

LIVER FLUKE PRECAUTIONS--WA farmers importing livestock must ensure that animals from Victoria, NSW and parts of South Australia are drenched for liver fluke on their arrival here, says the Department of Agriculture. The acting chief of the department's division of animal health, Mr Peter Lewis, said that under the State's post-entry regulation requirements the buyer had to give the animals two drenches to control fluke. The object of these regulations was to destroy any parasites in the imported animals and prevent any eggs reaching the intermediate host snail. This species of snail lived only in wetter areas. It was established in dairying areas south of Perth. Mr Lewis also warned farmers importing stock from any State other than South Australia that the animals must be held in quarantine over spring for footrot surveillance. [Perth THE WEST AUSTRALIAN in English 7 Dec 82 p 38]

CSO: 5400/7532

CATTLE DISEASE REPORTED IN EPIDEMIC FORM

Dhaka THE BANGLADESH TIMES in English 20 Dec 82 p 2

[Text]

KISHOREGANJ, Dec 19: Cattle disease in an epidemic form have been raging in and around Katiadi for a long time. A total of over 100 cattleheads died of the mysterious disease in about a month in these areas.

It is learnt that when a cattle is attacked by the disease there is a high temperature in the body and it trembles violently all over. The diseased cattle also dribbles profusely and ceaselessly by the mouth. It goes without food during the whole period and at last drops down on earth and dies in no time.

The worst affected areas are Charmandalla, Krishnapur, Sahabad and Kargson in and around Katiadi police station.

Some of these areas are 8 to 10 miles from the thana veterinary hospital and cultivators in most cases cannot take their diseased cattle heads to the hospital from such far-flung areas. Nor is the doctor available always for these distant places.

Many cultivators have in the meantime suffered great losses as a result of the death of their cattle. In some cases more than one cattle belonging to the same cultivator died of the disease. They are thus faced with difficulties in the matter of tilling their soil. If prompt measures are not taken to combat the disease, the situation may further deteriorate and cultivation in the areas may suffer.

BRIEFS

CATTLE QUARANTINED--The Ministry of Agriculture has announced recently that with effect from this week, all animals moving through Dibete Quarantine Camp will be confined for a period of two weeks. Entry and exit dates will be on the same day and all people with interest in putting cattle through the quarantine camp should contact the Veterinary Officer Mahalapye to ascertain the schedules. No cattle will be entered into the quarantine camp on dates other than those listed, according to a handout from the Ministry. Meanwhile, Dr Ronald Minor, who has recently taken up the post of Deputy Director of Veterinary Services in charge of disease control, has just completed a familiarization tour of the northern Botswana which included visits to the North East District, Ngamiland and Ghanzi, the handout further states. While in Ghanzi he was briefed on the rabies outbreak in the area which has affected livestock and jackals, as well as some people. Dr Minor, the handout states, had earlier held appointments in East and West Africa. Before coming to Botswana, he had been Chief Veterinary Research Officer in Southern Sudan. In view of rabies outbreaks in the area, the Director of Veterinary Services, Dr M.M. Mannathoko, will be visiting the Ghanzi livestock owners later. [Text] [Gaborone DAILY NEWS in English 7 Jan 83 p 2]

CSO: 5400/149

MEASURES TO COMBAT THREAT OF RINDERPEST

Ndjamena INFO CHAD in French 8 Jan 83 pp 7, 11

Text] Rinderpest, which is currently ravaging the Sudan, is a dangerous threat to Chadian livestock. This was revealed by Dr Prouvost, director of the Institute for Animal Husbandry and Veterinary Medicine of the Tropical Countries, former head of the Farcha Laboratory, in a discussion with RNT [Chadian National Broadcasting]. Dr Prouvost stressed the need to take emergency measures to avoid a national catastrophe as rinderpest is a terrible disease capable of wiping out 90 percent of susceptible livestock. These concerns are justified by the fact that Chadian livestock have not been vaccinated for 3 years.

This disease, which disappeared from Chad and Central Africa over 10 years ago, has reappeared in Mauritania and Ethiopia. From its breeding area in Ethiopia, which is the largest, the rinderpest invaded Somalia, Kenya (which was not greatly affected because the livestock have been vaccinated), Tanzania and the Sudan in succession. According to information received in October, this epidemic which has already killed 130,000 head of cattle in the Sudan, has been spotted in Darfur in the El Facher region, 250 kilometers from the Chadian border. Indeed, some signs have shown up in Adre and in Karme, to the east of Mtsaquet.

Informed Chadian authorities reacted promptly by launching appeals for international assistance. The FAC [Aid and Cooperation Fund] and the EDF responded immediately and Chad now has enough vaccine to take action. Now as a final step the animal husbandry departments must be equipped, especially with transportation, in order to proceed as quickly as possible with the vaccination of the Chadian livestock. Twelve vehicles are to arrive from Douala very shortly. La Sotera will also offer vehicles for this emergency operation.

Dr Prouvost has returned to Chad to install Dr Perbezat who will resume the distribution of the vaccine with the staff at the Farcha Laboratory.

NOTES ON FOOT-AND-MOUTH, BRUCELLOSIS, CACAO-BORNE RUST

Bogota EL TIEMPO in Spanish 27 Dec 82 p 13-C

[Excerpts] The ICA [Colombian Agricultural and Animal Sciences Institute] and VECOL [Colombian Veterinary Products Enterprise] reported to the cattle owners of Costa Atlantica and Pie de Monte Llanero y Santanderes that there is a sufficient quantity of vaccine to control foot-and-mouth disease during the current vaccination period that began on 1 December. In addition, 3 million doses will be allotted for next month's needs.

Both agencies are asking the medium and large-scale cattle owners of the above mentioned areas to immediately provide more protection to their cattle ranches by vaccinating the cattle that have not yet received this protection.

They also said that during January anti-foot-and-mouth disease vaccination programs will be carried out in the departments of Caldas, Quindio, Risaralda, the Cauca River valley, and the high plateau of Boyaca and Sabana of Bogota, including the valleys of Ubaté, and Chiquinquirá.

Pacho Is Quarantined

The outbreak of foot-and-mouth disease, about the middle of the month in the Cundinamarca town of Pacho, obliged ICA Regional Department No 1 to announce a quarantine. Also, a ban was declared on the transport of animals, products, and by-products.

The Colombian Agricultural and Animal Sciences Institute reported that the foot-and-mouth disease outbreaks that occurred in November in Ubaté and Mosquera have been controlled. The ICA reported an outbreak of hog cholera in Guateque (Boyaca) and one in New Castle. Cattle owners have been alerted to take necessary precautions and to report any symptoms.

Antioquia Free of Brucellosis

On 21 December the ICA and Colanta administrative offices issued a certificate to 17 cattle owners, to certify that their ranches were free of brucellosis, a disease considered to be one of the most dangerous on cattle ranches.

The healthful status of these ranches was confirmed after 6 months of investigation, during which time blood samples were taken from cattle. The certificates were delivered by Jaime Isaza Restrepo, Regional Director for Antioquia and Choco; Cesar August Lobo Arias, deputy director of cattle production; Gustavo Manrique, director of Animal Health; Jose Perez, director of the brucellosis campaign; and Jenaro Perez, director of the Dairy Cooperative of Antioquia Colanta.

Rust Through Tumaco?

A. Ospina Leon, a reader, sent us a letter in which he spoke of the contraband of cacao. The sender said that the illegal transportation of this product from Ecuador, which comes in through Tumaco, could facilitate the entry of rust, since it is known that this disease exists in that country.

In addition, said the correspondent, there is a risk that the influx of peasants who return to their farms after selling their products to an agency that buys the contraband cacao may bring in rust spores. Ospina Leon also complained of the unnecessary closing of the border with Ecuador, since innumerable Tumaco docks and those along the entire Narino coast make it possible for thousands of tons of cacao to enter daily.

8255

CSO: 5400/2037

NEW FOOT-AND-MOUTH OUTBREAK HITS JUST AS AGRICULTURE WEAKENED

Copenhagen BERLINGSKE TIDENDE in Danish 19 Jan 83 Sect III p 2

[Article by Mogens Bryde]

Denmark will lose up to 3 billion kroner in export earnings if the important markets, such as Japan, remain closed for another 3 years on account of the foot-and-mouth disease, Minister of Agriculture Niels Anker Kofoed (Liberal Party) stated last Monday in Brussels in connection with the meeting of the Council of Ministers of the European Community.

He stated that this is particularly serious at a time when Danish agriculture is economically weakened. To this comes that there can never be any certainty that it will be possible to re-establish the markets.

However, the minister of agriculture said that there seems to be no risk that measures will be taken within the EC which will be detrimental to Danish exports. The fact that, at the meeting of the Council of Ministers, he had given a very detailed report on the efforts made after the most recent outbreak in Finland had had a positive effect.

Niels Anker Kofoed said that the ministers had sent "a political signal" to the Veterinary Committee of the EC, which, next Wednesday, will discuss the situation.

"I found that my colleagues, if anything, were surprised that we have taken such drastic measures," Niels Anker Kofoed said.

His report was made at the beginning of a meeting where the main item on the agenda was the committee's proposal for an average price increase of 4.4 percent for farmers.

As expected, there was a great distance among the partners. Denmark has not been asked upon specific demands with regard to price increases, but the Danish Minister of Agriculture said that there ought to be no increases at all, in contrast to France and Italy, which wanted still larger increases proposed by the committee.

...in the negotiations, Niels Anker Jørgensen stated that it was very difficult to show that it will, this time, be very difficult to reach a compromise, especially in respect of milk prices. It was his impression that a very tense political situation exists.

Other delegation sources said that the West German Federal Government's election next March may render the negotiations concerning new agricultural prices difficult, since, at a critical point of time, doubt will arise as to the future of the Bonn government.

Niels Anker Jørgensen stated during the meeting of the Council of Ministers that even if an improvement has taken place in 1982, incomes within the agricultural sector still remain lower than within other industrial sectors.

1000
1000: 4617/52

BRIEFS

AGRICULTURE MINISTRY DISEASE REPORT--An informative report supplied by the Ministry of Agriculture and Livestock [MAC] reveals that the area infested by coffee rust in the country is 172,058 manzanas, of which only 169,158 have been treated, benefiting 7,221 producers. Also, it is reported that in the inquiry to spot the presence of the coffee borer, 9,777 manzanas were investigated on a total of 176 farms with negative results. Ministry experts covered an area of 21,911 manzanas cultivated with sugar cane, having detected the presence of the destructive sugarcane rust on 800 manzanas spread across different zones of the country. In relation to the campaign against exotic diseases such as brucellosis that affect the cattle industry, it is reported that during 1982, some 25,332 cattle were checked on a total of 351 properties, vaccinating 7,200 cattle and verifying that 18 herds are free of said disease. Investigating the existence of bovine brucellosis, 26,990 animals were subjected to a skin test on 354 livestock properties. It is verified, according to MAC, that 16 herds are free from tuberculosis. Finally it is revealed that as for botfly larva, it is verified that 11,133 animals were affected by that parasite out of 21,714 which were subjected to veterinary treatment on a total of 863 cattle farms. It is estimated that the MAC operation in this direction has been the most effective possible under the circumstances. [text] [San Salvador EL MUNDO in Spanish 31 Dec 82 p 18] 9989

BRIEFS

ANTIRABIES CAMPAIGN BEGUN--The Ministry of Public Health started a dog and cat antirabies campaign yesterday. The campaign is being carried out by the Department of Zoonosis, of the Ministry of Public Health. In this connection, Dr Eleazar Ramos Rodriguez, a Public Health veterinarian, told LA PRENSA that the aim of the campaign is to exercise greater control over the disease through the immunization of dogs and cats through the administration of vaccine. He reminded one that the antirabies campaign is not an isolated program, but that it is part of an overall program, the first stage of which was the elimination of wandering dogs, which was widely supported by the citizenry in general and by state and private institutions.

[Excerpts][San Pedro Sula LA PRENSA in Spanish 19 Jan 83 p 15] 8255

CSO: 5400/2043

MEASURES USED TO PREVENT VETERINARY BRUCELLOSIS

Beijing ZHONGHUA LIUXINGBINGXUE ZAZHI [CHINESE JOURNAL OF EPIDEMIOLOGY] in Chinese
Vol. 3 No. 6, Dec 62 pp 338-340

Article by Jin Genyuan [6855 2704 3293] et al of Xinjiang Research Institute of Epidemiology

SUMMARY For more than a decade, the Department of Veterinary Medicine of Xinjiang has carried out an extensive program of Brucellosis control in animals and some relatively good results were obtained. During the same period, the rate of human Brucellosis has also dropped somewhat. According to results of surveys in 1963 and 1960, the infection rate among animals has dropped from 6.54 percent to 2.05 percent. Judging from the infection rate of humans, animals, and different age groups, of the 3 immunization procedures tested, the epidemiological effects of the hypodermic technique are the best, the gaseous mist the second, and the powder mist the third. The 3 immunization procedures and the different degrees of effectiveness are discussed in some detail.

2048

SC: 5400/4115

BRIEFS

ISOLATION OF FOOT-AND-MOUTH AREAS--Harare--The Zimbabwean Government is to erect a cattle fence along the Gwanda-Beit Bridge district boundary to isolate high-risk foot-and-mouth disease areas, according to the Assistant Provincial Veterinary Officer for Matabeleland south, Dr Denis Lampard. The fence will stretch for 70 km from Tuli Circle on the border with Botswana to West Nicholson, where it will join other fences on commercial farms. The cost of fencing materials is estimated at R78 000. The Government was prompted to erect the fence after the European Economic Community said it would import Zimbabwean beef provided it was free of foot-and-mouth disease. More than \$1-million could be earned annually by Zimbabwe from beef exports to the EEC countries, Dr Lampard said.--SAPA [Text] [Johannesburg THE CITIZEN in English 7 Feb 83 p 11]

14-00000

WORLD WAR II - SWEDEN: WARY AFTER DECADE WAR ON BARK BEETLE

DUBLIN (AP) - Oslo, Norwegian, 17 Jan 83 p 39

OSLO (AP) - Page 38, column 1: "Billion-Kroner Bark Beetle War"

Oslo (AP) - The war against the bark beetle has raged for 10 years, and this year's lumbering and industry close to 7 million kroner. Lumbering alone has lost ca. 500 million kroner. The figures for industry are less certain. Øyvind Malmgren, forest inspector in the Ministry of Agriculture, told APINPOSTEN.

Sweden's forestry has won the fight now, but after last year's outbreak, the industry and the authorities still have an alert. For that reason the Ministry of Agriculture has recently ordered another 100,000 traps for the bark beetle to be set out in the spring and summer.

Several hundred thousand in which synthetic odoriferous substances (BARK) are used during the winter season are placed in traps that have a small hole in the forest landscape in some places--as black plastic traps--in the forest. These are made by Fjeldhammar Brug A/S, which has a factory in the forest--in the FRG. The odoriferous material consists of several synthetic components, is a part of the production in Sarpsborg.

The bark beetles were found in large numbers--and in the forest--in the spring--we have the situation under control. For a while it was difficult, but it is going fine," says Malmgren. The individual lumberman must first of all make sure that the forest is not too dense. It is gotten out of the forest in good time, and the forest is converted into a spawning ground. Underneath the bark beetle is as soon as it is warm enough in the late spring or early summer. It is therefore best to be on the safe side.

Source: The Norwegian Institute for Forest Research, Oslo, 17 Jan 83. The bark beetle war has been a long one, and it is still going on. The bark beetle war has been a long one, and it is still going on. The bark beetle war has been a long one, and it is still going on.

PLAN FOR CONTROL OF LOCUST DRAWN UP

Karachi DAILY in English 15 Jan 83 p 4

[Text]

... satellite re-
... techniques in locust
... operations throughout the
... of Pakistan have been
... of the Plant Protection
... of locusts.

... address at the
... week National Training
... on "locust control". Mr
... Ahmad, Director
... of the Plant Protection De-
... ment, said the use of satellite
... would bring in many
... .

Among these he listed improved
... in anti locust campaigns

and in the long run — lower costs.

He said efforts were being made
... a ground station which
... would receive signals from orbiting
... earth satellites about the latest
... situation in potential locust breed-
... ing regions in the country.

This would make it possible to
... launch immediate control opera-
... tions in which satellite data showed
... the presence of appreciable num-
... bers of locusts.

Pakistan was situated in the inva-
... sion belt of these pests, and its ma-
... jor crop-growing areas on either
... side of the River Indus were con-
... tinuously under their attack, he

said.

Referring to the efforts to be
... made to beef up locust control po-
... tentials, he said Pakistan had re-
... cently approved a Rs. 20 lakh
... scheme to increase the strength of
... the plant protection technical staff
... in the desert areas of the country.

The training course has been ar-
... ranged by the Plant Protection De-
... partment with the collaboration of
... the Rome-based FAO about 40 of-
... ficers from all over the country are
... participating. Short field trips form
... part of the course. A FAO expert,
... Mr D Roffey, has come from Rome
... for lectures — AFP

NURSERIES TO BE SET UP TO CONTROL NEMATODES

Karachi DAWN in English 15 Jan 83 p 4

[Text]

ISLAMABAD, Jan 14: The Pakistan Council of Scientific and Industrial Research Laboratories has planned to raise nematode-free nurseries to combat and control the pest.

Nematodes are thread and round worms visible under the microscope only. It is for this reason that nematodes have been termed as "hidden enemy" or "tiny but mighty enemies of crops".

The workers in the field of agriculture and growers in Pakistan are not nematode-conscious. This menace has caused extensive damage to the crops without being seen or known.

There are thousand of kinds of nematodes which attack all type of plants. Some nematodes are specific to a specific crop, whereas others are polyphagous i.e., attacking several crops.

Secondary invasion

Nematodes obtain their food by sucking the roots with an especially designed organ known as "Stylet". In this way they cause direct mechanical injury to the plant and disturb its system biochemically. When root is punctured by the nematode, other micro-organisms present in soil may also cause damage to it. This is called secondary

invasion.

A few nematodes may cause more damage to a seedling (say mango) than a thousand to a grown-up tree (nematodes may be in millions or billions in the soil around a tree). Therefore, it is necessary that the plants are protected from their attack at the seedling stage. It is just like protecting a new born baby, who in tender age is more susceptible to diseases than a grown-up man.

The renowned Dutch nematologist, Seinhorst, is of the view that trees may have more roots than they actually need to support them. In this event damage to a part of root system may not be a limiting factor in the yield of fruit. However, obviously, seedlings or nursery stocks of plants do not have extra roots and therefore presence of a few nematodes can limit their growth or even cause death.

This period during which plants do not have any extra root may be termed as "a critical period of growth" for that plant. The protection of plants during this period is important.

Nematode-free nurseries protect the plants during this period, which makes the difference throughout the life of the plant.

Two types of measures can be adopted: preventive measures and

curative measures. The PCSIR experts say that "an ounce of prevention is better than a pound of cure". Hence a nematode-free nursery, understandably, is a very effective means to check the spread of nematodes.

Not all pests are preventable but nematodes are, as they are not airborne. However, if the plant or soil has been "attacked" by nematodes, curative measures become necessary. This measure can be taken before plantation (pre-plantation treatment) or after plantation (post-plantation treatment). An analysis of soil and plant material is essential for post-plantation treatment. Pre-plantation treatment of soil is in a way a preventive measure and may be taken without a prior analysis of soil.

Banana corms that are supplied by the PCSIR laboratories, Karachi, are not only free of pathogenic nematodes but they also carry with them substances that keep the nematodes away for a long time during the critical period of growth. This growth is affected by several factors like, soil type, moisture and the nematodes with their concomitant soil organisms. The coating given with these substances also slows down the rate of dehydration of the corms which results in their increased storability. —APP

BRIEFS

NO LOCUST ACTIVITY IN DECEMBER--Pakistan remained free from gregarious locust activity during December but stray solitary adults were observed in a few distant localities of coastal area of Baluchistan. A maximum population of 10 adults per square kilometre was reported from Gano area in Gwadar district. The locust activity is expected to remain calm in winter/spring breeding zone. In India and United Arab Emirates also scattered locust population was observed.--APP. [Text] [Karachi DAWN in English 19 Jan 83 p 8]

CSO: 5400/4709

MUSHROOM DISEASES IN BEIJING INVESTIGATED

Tianjin ZHIWU BINGLI XUEBAO [ACTA PHYTOPATHOLOGICA SINICA] in Chinese No 3, Sep 82 pp 53-58

[Article by Zhu Huizhen [2612 1979 6297], Beijing Institute of Feeding: "Investigation of Mushroom Diseases in Beijing"]

[Summary] The state of contamination and diseases of the mushroom (*Agaricus bisporus* (Lange) Sing.) were investigated under controlled conditions. The harmful fungi occurring in the first stage of compost were *Papulospora byssina* Hoston, *Scopulariopsis fimicola* (Cost. and Matr.) Vuill, *Chaetomium olivaceum* Cooke, *Trichoderma viride* Fries. In addition, *Aphanoascus* sp., *Pyronema domestica* (Sow.) Sacc. and *Peziza ostreaoderma* Korf. occurred in the post-fermented compost and casing materials, especially the casing soil.

The mushroom diseases are caused by *Verticillium fungicola* Prouss., *Pyronema ornithoglossum* Magn., *Pseudomonas tolaasi* Paine and nematodes (*Ditylenchus myceliophagus* Goody and *Aphelenchoides composticola* Franklin).

According to data of the present experiments, the conclusion is drawn that the post fermentation, pasteurization of casing materials at 60°C, disinfecting operations for mushroom house sanitation and controlling the pathogens in the primitive mushroom caves and buildings are necessary for a good harvest in Beijing.

9717

CSO: 5400/4120

CAUSAL ORGANISMS OF SWEET POTATO ROOT ROT DISCUSSED

Tianjin ZHIWU BINGLI XUEBAO [ACTA PHYTOPATHOLOGICA SINICA] in Chinese No 3, Sep 82 pp 47-52

[Article by Hu Gongluo [5170 0361 3157] and Zhou Lihong [0719 7787 7703], both of Yuxi Agricultural College, Henan: "The Causal Organisms of Root Rot of Sweet Potato"]

[Summary] A sweet potato root rot has occurred in Henan, Shandong, Jiangsu, Anhui, Hebei and Hubei provinces of China in recent years. Results of isolation and identification proved that the main pathogenic fungi are three different species or varieties of *Fusarium javanicum* Koord, *F. javanicum* var. *radicicola* and *F. solani* var. *coeruleum*. *F. javanicum* was the most virulent, and had the highest frequency of the three. In addition, *F. moniliiforme* var. *subglutinans*, *F. oxysporium* Schlecht and *Macrophoma pnaseoli* (Maubl) Ashby were often isolated from decaying roots, but had weak pathogenicity or were even avirulent.

The typical isolate of *F. javanicum* in Henan Province easily produced the perithecial stage under laboratory conditions. It was identified as *Hypomyces opomoeae* (Hal) Wr.

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CSO: 5400/4120

FUSARIUM INFECTING WHEAT, BARLEY SPIKES IN CHINA STUDIED

Tianjin ZHIWU BINGLI XUEBAO [ACTA PHYTOPATHOLOGICA SINICA] in Chinese No 3, Sep 82 pp 1-12

[Article by Chen Hongkui [7115 7703 6652] and Wang Gongchen [3769 2162 6591], both of the Plant Protection Department, Zhejiang Agricultural University, Hangzhou, and Liang Xunyi [2733 6064 5030], Plant Protection Institute, Zhejiang Academy of Agricultural Sciences, Hangzhou: "Studies on *Fusarium* Species Infecting Spikes of Wheat and Barley in Zhejiang Province"]

[Summary] From 1975-1981, a total of 500 samples of head blight of wheat and barley, caused by *Fusarium* species, was collected from several areas in Zhejiang Province. Pure culture isolates were examined and studied for identification. Results of studies of 12 species are presented.

Fusarium graminearum was predominant in distribution, representing 93.9 percent of the total samples collected. Other species, arranged in decreasing order of percentage, were: *F. moniliforme* (2.4 percent), *F. acuminatum* (1.2 percent), *F. lateritum* (0.6 percent), *F. avenaceum* (0.4 percent), *F. equiseti* (0.4 percent), *F. tricinctum* (0.2 percent), *F. nivale* (0.2 percent), *F. semitectum* (0.2 percent), *F. fusarioides* (0.2 percent), *F. oxysporum* (0.2 percent) and *F. oxysporum* var. *redolens* (0.2 percent).

Virulence studies of the 12 species, based on reaction on wheat spikes, showed that *F. graminearum* was rated as virulent toward wheat, *F. acuminatum*, *F. tricinctum* and *F. avenaceum* were rated medium in virulence, and the virulence of the rest of the species was weak.

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CSO: 5400/4120

MORPHOLOGICAL, SEROLOGICAL STUDIES OF BEIJING RICE BACTERIOPHAGE

Tianjin ZHIWU BINGLI XUEBAO [ACTA PHYTOPATHOLOGICA SINICA] in Chinese No 3,
Sep 82 pp 33-40

[Article by Chu Juzheng [5969 5468 1769], Zou Xuerong [6760 7185 5554] and Shang Yuxia [0794 3768 7209], all of the Institute of Crop Germplasm Resources, Chinese Academy of Agricultural Sciences, and Di Yuanbo [3695 0626 3258], Beijing Agricultural University: "On the Bacteriophage of *Xanthomonas oryzae* (Uyedaefishiyama) Dowson in Beijing--Morphological and Serological Studies"]

[Summary] A bacteriophage was isolated from rice fields in various localities of Beijing. Morphological studies with an electron microscope revealed that two types of phage exist: Type A has a long noncontractile tail and gives rise to a larger circle of plaque on an agar plate (4 mm in diameter). Type B has a short contractile tail and gives rise to a smaller plaque (1 mm in diameter). The heads of both types of phage were polyhedral.

The size of the bacteriophage was noted as follows: head of Type A 60 x 59 nm with a long tail 133 x 12 nm and head of Type B 70 x 59 nm with a short tail of 95 x 16 nm.

Serological identification with the antiserum of these two phages, including neutralization test, assay of K value and cross-relation test, was carried out. It was found that types A and B were definitely different types of bacteriophage as determined by serological reactions.

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CSO: 5400/4120

SHINYANGA CROP PEST STATION

Dar es Salaam DAILY NEWS in English 13 Jan 83 p 3

[Text]

SHINYANGA — The Ministry of Agriculture has established a station at Shinyanga which will combat all destructive pests of crops in Shinyanga, Mwanza and Tabora regions, *Shihata* reported.

A letter from the Shinyanga Regional Agricultural office which has been circulated to the three regions says that the opening of the station was aimed at ensuring that such services reached peasants quickly in the western zone.

This now brings the number of such stations in the country

to four. Other stations are in Arusha and Mbeya for the southern zone and Dodoma for regions in the central zone.

The officer in charge of the Shinyanga station, Ndugu Shumbusho Damasi, has called on peasants to cooperate with agricultural officers by immediately reporting sight of destructive pests.

Destructive birds quelea quelea, are seen in large swarms in the three regions between February and March. They attack millet.

CSO: 5400/136

TANZANIA

BRIEFS

ANTI-ARMYWORM CAMPAIGN--About 2,600 litres of DDT have arrived in Morogoro Region for immediate distribution to areas invaded by army-worms. Regional Agricultural Development Officer B. Ishumi told SHIHATA in Morogoro yesterday that armyworms had been spotted in the Kimamba Ward in Kilosa District where spraying had already started. He said there were reports of armyworm infestation from other districts in the region and that a lorry was to leave Morogoro yesterday for Ulanga, another possible area for infestation. Distribution of the chemical would take about a week, he added. [Text] [Dares Salaam DAILY NEWS in English 15 Jan 83 p 3]

CSO: 5400/141

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